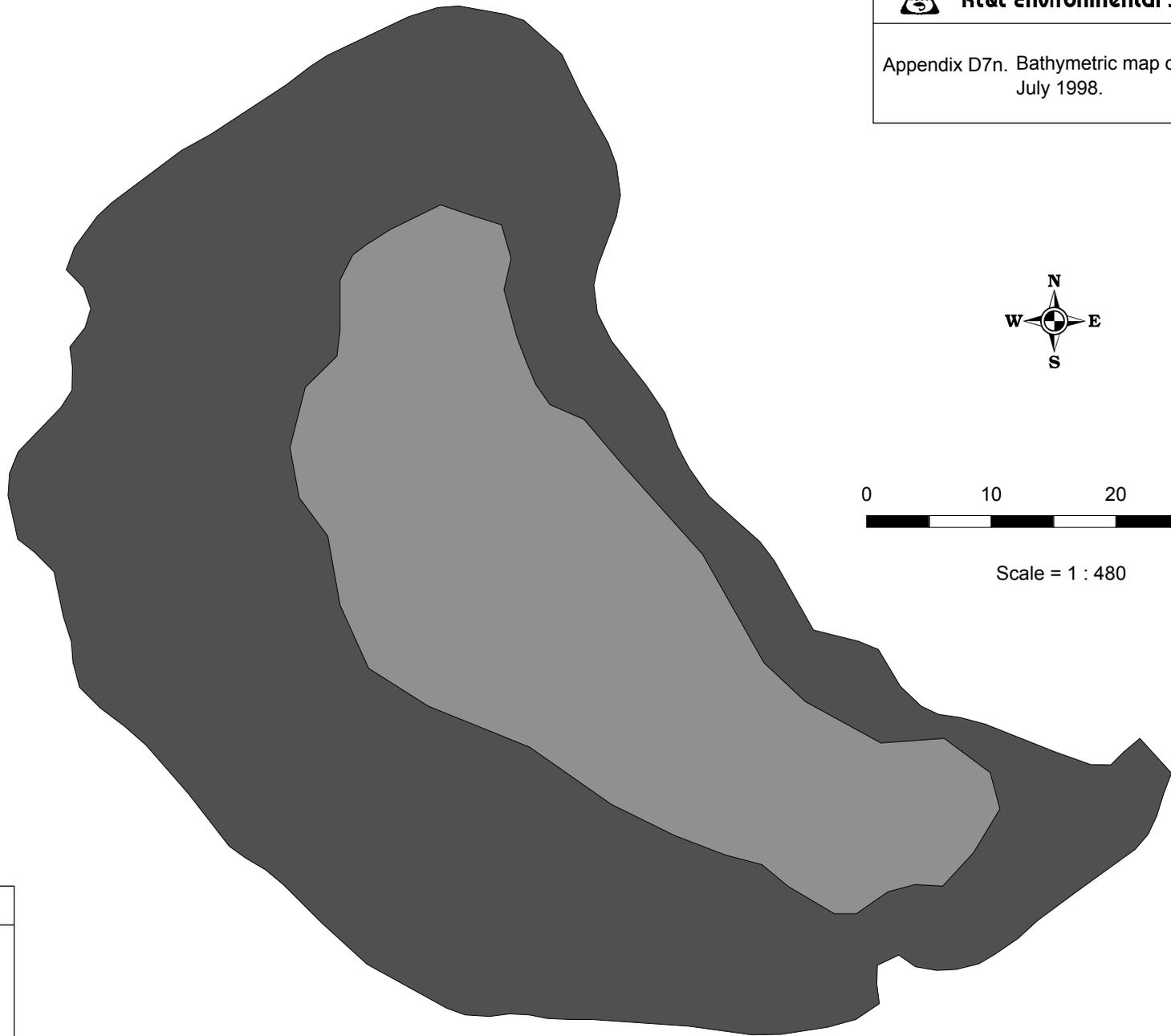




RL&L Environmental Services Ltd.

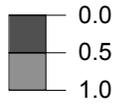
Appendix D7n. Bathymetric map of Pond B10,
July 1998.



Scale = 1 : 480

LEGEND

Depth (m)



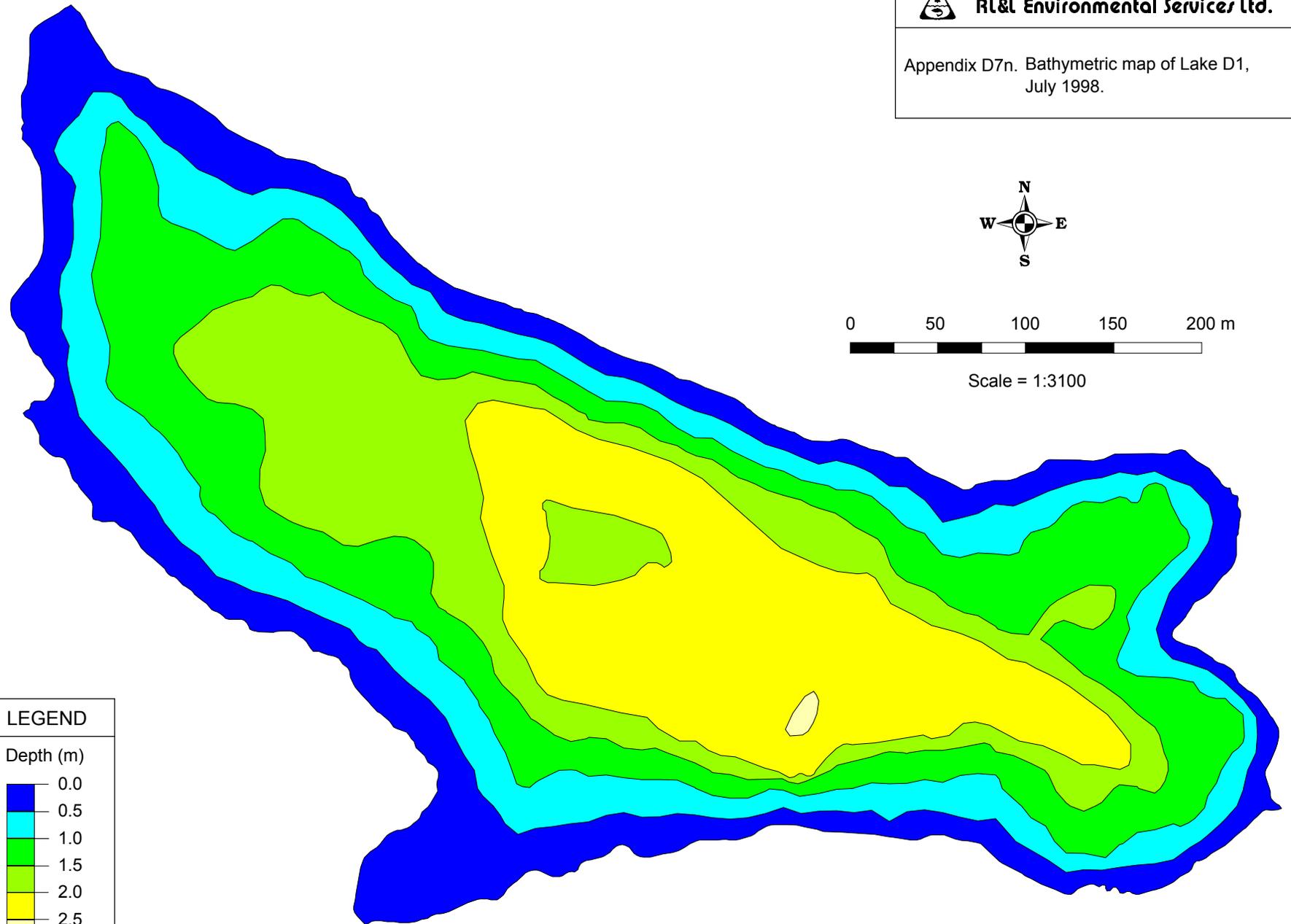


RL&L Environmental Services Ltd.

Appendix D7n. Bathymetric map of Lake D1,
July 1998.

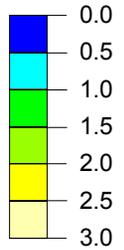


Scale = 1:3100



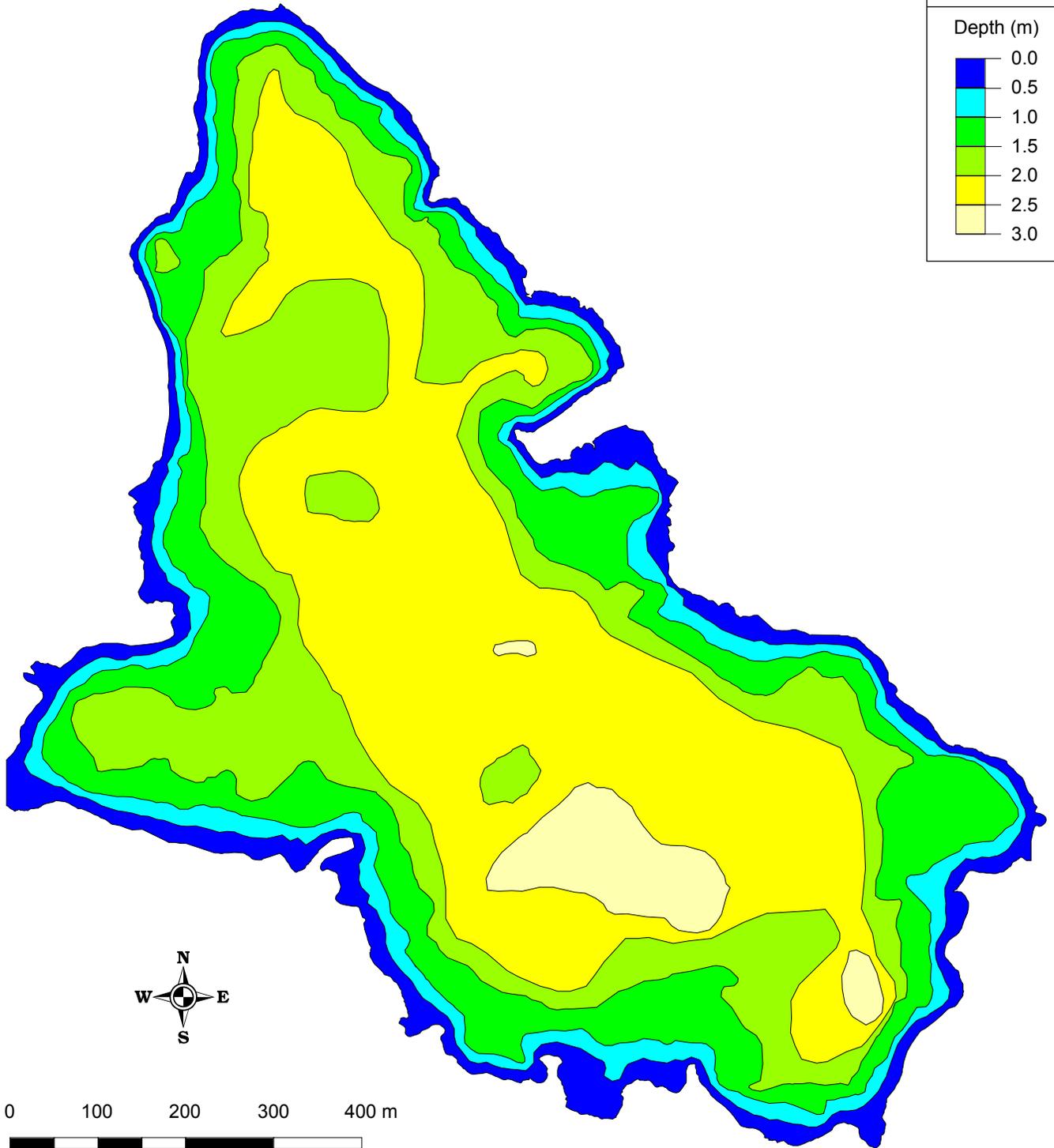
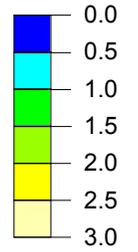
LEGEND

Depth (m)



LEGEND

Depth (m)



0 100 200 300 400 m

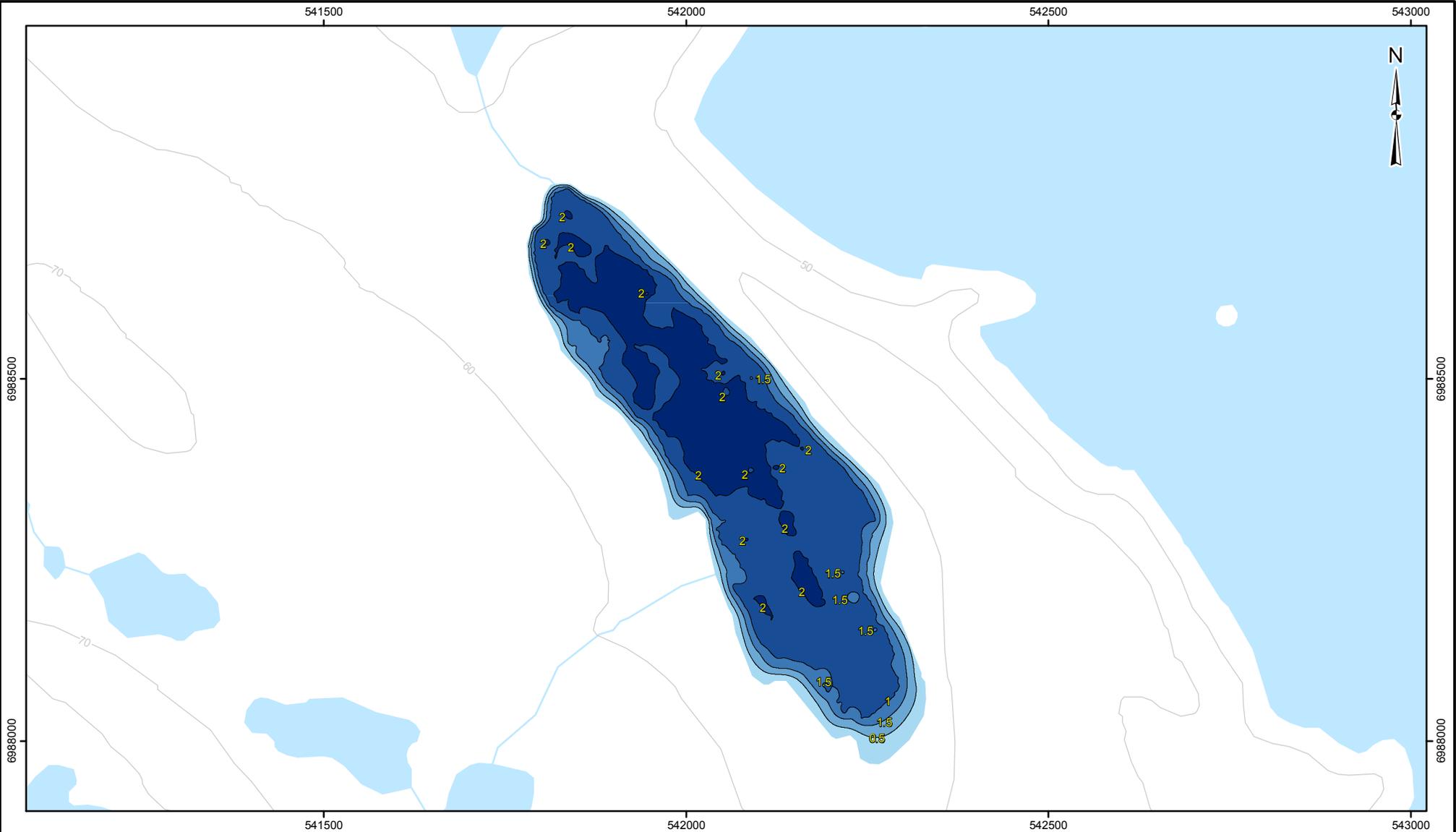


Scale = 1 : 6700



RL&L Environmental Services Ltd.

Appendix D7o. Bathymetric map of Lake D7,
July 1998.



LEGEND

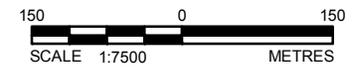
- | | | |
|---|-------------|-------------------------|
| — | CONTOUR | LAKE DEPTH (m) |
| — | ISOBATH (m) | |
| — | WATERCOURSE | 0.0 0.5 1.0 1.5 2.0 2.5 |
| | WATERBODY | |

NOTE

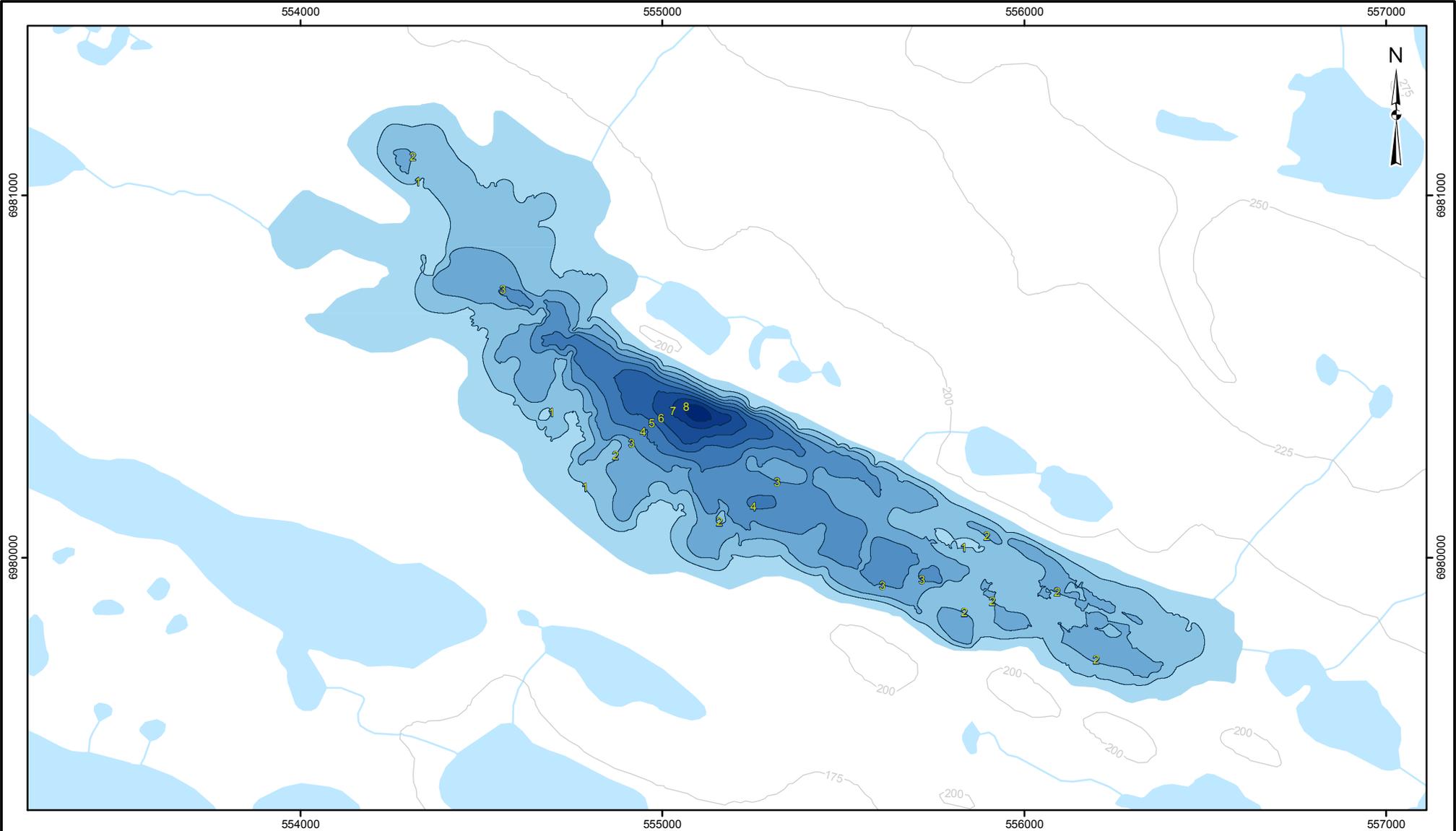
Bathymetric point data collected by Golder Associates Ltd, July, 2009
 Maximum Recorded Depth: 2.3 m

REFERENCE

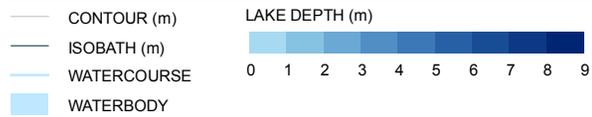
Data obtained from Government of Canada, Natural Resources Canada, Centre for Topographic Information (1:50,000).
 Projection: UTM Zone 15 Datum: NAD 83



PROJECT		COMPLEX MINERALS CORPORATION	
COMPLEX MINERALS CORP		MELIADINE GOLD PROJECT NUNAVUT	
TITLE			
LAKE J1 BATHYMETRY			
	PROJECT NO.	09-1373-0010	SCALE AS SHOWN
	DESIGN	RP 27 Nov. 2009	REV. 0
	GIS	CDB 27 Nov. 2009	
	CHECK	RP 27 Nov. 2009	
	REVIEW	JP 27 Nov. 2009	Appendix D7p



LEGEND

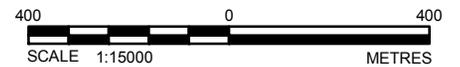


NOTE

Bathymetric point data collected by Golder Associates Ltd, August, 2008.
Maximum Recorded Depth: 8.9 m

REFERENCE

Data obtained from Government of Canada, Natural Resources Canada, Centre for Topographic Information (1:50,000).
Projection: UTM Zone 15 Datum: NAD 83



PROJECT	COMPLEX MINERALS CORP	COMPLEX MINERALS CORPORATION MELIADINE GOLD PROJECT NUNAVUT
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TITLE	CHICKENHEAD LAKE BATHYMETRY
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<p>Golder Associates Edmonton, Alberta</p>	PROJECT NO. 09-1373-0010	SCALE AS SHOWN	REV. 0
	DESIGN DC 21 Aug. 2008		
	GIS CP 22 Oct. 2008		
	CHECK JP 20 Nov. 2008		
	REVIEW LY 20 Nov. 2008	Appendix D7q	

Appendix D8. Size and habitat characteristics of ponds in the Meliadine Study Area, 1998 - 2009.

Pond	Location (15V)		Area (m ²)	Perimeter (m)	Max. Depth (m)	Substrate (%)						Cover (%)					Water Quality					
	Easting	Northing				Organics	Silt	Sand	Gravel	Cobble	Boulder	Boulder Garden	Depth / Turbidity	Aquatic Vegetation	Terrestrial Vegetation	Undercut Bank	Date	Temp. (°C)	Cond. (µS/cm)	pH (units)	Diss. Oxygen (% sat.)	
A9	540149	6988152	19114	570	0.47												13-Jul-08	18.0	-	-	-	
A10	540058	6988320	2664	205	0.67												13-Jul-08	17.0	-	-	-	
A12	539893	6988583	3024	220	0.87												13-Jul-08	18.0	-	-	-	
A13	539800	6988651	3598	230	0.31												12-Jul-08	19.0	-	-	-	
A17	539368	6989072	934	114	-												19-Aug-98	17.6	257	-	-	
A35	540605	6987953	6604	322	0.43												13-Jul-08	18.0	-	-	-	
A37	540299	6987950	9940	437	0.64												13-Jul-08	17.0	-	-	-	
A38	540509	6988216	5197	282	0.54												13-Jul-08	17.0	-	-	-	
A39	540394	6988311	2019	172	0.29												13-Jul-08	20.0	-	-	-	
A40	539157	6988214	7502	351	0.82												13-Jul-08	17.0	-	-	-	
A40	539157	6988214	7502	351	1.04	65	20	10		5	10	60	20		10	02-Jul-09	17.5	97	6.7	-		
A41	539072	6988284	629	93	0.43	80	10			5	5		10	40	10	40	02-Jul-09	16.5	123	6.6	-	
A50	542548	6986204	810	108	0.60	80	5			5	10		80		10	09-Jul-09	13.9	105	7.6	98		
A51	542558	6986096	3711	238	0.50	85				5	10		10	80		10	09-Jul-09	14.3	301	8.3	110	
A53	542477	6986092	723	102	0.19	40	20			20	20		60			20	09-Jul-09	16.0	181	7.7	125	
A54	540246	6988671	58993	1127	0.92												13-Jul-08	-	-	-	-	
A55	540207	6988967	461	82	-												19-Aug-98	15.5	415	8.4	-	
A56	539879	6988912	937	123	-												19-Aug-98	15.3	2007	-	-	
A57	540021	6988822	3254	216	-												19-Aug-98	17.0	350	-	-	
A58	539711	6989171	3935	246	-												19-Aug-98	16.9	223	-	-	
B8	539024	6988906	10724	401	0.61												12-Jul-08	17.0	-	-	-	
B8	539024	6988906	10724	401	0.82	50	10			10	30	30	10	30	10	20	02-Jul-09	18.1	1358	7.2	-	
B9	539175	6988651	6644	337	0.74												12-Jul-08	17.0	-	-	-	
B9	539175	6988651	6644	337	>1.4	70	10			5	5	10	10	30	20		40	02-Jul-09	16.9	745	5.0	-
B10	539425	6988384	2392	218	0.70												12-Jul-08	16.0	-	-	-	
B10	539425	6988384	2392	218	0.70	50	10			10	20	10	20	40	10		30	02-Jul-09	15.6	396	7.0	-
B25	537351	6990233	14230	472	1.05		20			10	70	80	10	10			02-Jul-09	19.6	173	5.2	-	
B26	537273	6990411	700	115	0.45	55	10			15		20	20	5	50	15	10	02-Jul-09	23.0	224	6.3	-
B27	536973	6990274	1156	156	0.86	60	10			5		25	10	5	50	15	20	02-Jul-09	20.4	70	5.2	-
B28	538214	6989727	3716	232	0.55	70	5				5	20	15	10	25	25	25	02-Jul-09	18.1	116	7.9	-
B28a	538150	6989801	-	-	0.28	70	10				20	20		70			10	03-Jul-09	20.8	219	7.6	-
B29	539516	6988320	630	99	0.33	10	10			70	10			10	30	60	03-Jul-09	14.7	40	6.8	-	
B30	537999	6988890	767	103	-													12-Jul-08	20.0	-	-	-
B31	538103	6988807	577	90	-													12-Jul-08	19.0	-	-	-
B32	538240	6988756	5406	279	-													11-Jul-08	18.0	-	-	-
B33	538748	6988659	3262	209	0.85													11-Jul-08	19.0	-	-	-
H1	540755	6989620	9183	376	1.31													02-Aug-08	15.6	126	8.2	-
H1	540755	6989620	9183	376	1.15	10	10			10	60	10	80		10		10	07-Jul-09	13.9	145	7.1	100
H2	540577	6989433	615	97	0.25													02-Aug-08	15.9	169	8.1	-
H2	540577	6989433	615	97	0.26	60	10			10	10	10	20		70		10	08-Jul-09	13.6	107	7.5	105
H2a	540536	6989494	310	65	0.10	80				10	10	80		10			10	07-Jul-09	25.2	201	7.8	115
H3	540498	6989408	1099	128	0.36													02-Aug-08	15.2	154	8.3	-
H3	540498	6989408	1099	128	0.35	40	5			5	20	30	20		70		10	08-Jul-09	15.3	95	7.7	110
H4	540356	6989429	409	76	0.55													02-Aug-08	15.0	115	8.1	-
H4	540356	6989429	409	76	0.48	90	10							60	10	30		07-Jul-09	21.1	77	6.3	105
H5	540247	6989437	2040	174	0.60													02-Aug-08	15.2	123	8.4	-
H5	540247	6989437	2040	174	0.62	30	10			10	40	10	10	40	20		30	07-Jul-09	21.0	91	8.5	111
H5a	540263	6989334	513	84	0.35	60	10			10	10	10	20		60		20	07-Jul-09	21.5	451	7.1	111
H5b	540246	6989289	763	110	0.28	70					20	10			80	20		07-Jul-09	22.7	1138	6.1	126

Appendix D8. Size and habitat characteristics of ponds in the Meliadine Study Area, 1998 - 2009.

Pond	Location (15V)		Area (m ²)	Perimeter (m)	Max. Depth (m)	Substrate (%)						Cover (%)					Water Quality				
	Easting	Northing				Organics	Silt	Sand	Gravel	Cobble	Boulder	Boulder Garden	Depth / Turbidity	Aquatic Vegetation	Terrestrial Vegetation	Undercut Bank	Date	Temp. (°C)	Cond. (µS/cm)	pH (units)	Diss. Oxygen (% sat.)
H6	540075	6989336	6725	353	0.46												02-Aug-08	18.9	182	8.6	-
H6	540075	6989336	6725	353	0.58	70			10	10	10	10	10	30	20	30	07-Jul-09	20.3	67	8.5	108
H7	539960	6989480	392	73	0.67												01-Aug-08	20.9	97	8.6	-
H7	539960	6989480	392	73	0.28	80				10	10	20		40		40	07-Jul-09	21.9	157	8.0	104
H8	539846	6989533	2852	231	0.38												01-Aug-08	18.5	111	8.6	-
H8	539846	6989533	2852	231	0.59	90	5				5			40	40	20	06-Jul-09	19.6	187	8.2	89
H9	539755	6989607	3305	219	0.42												01-Aug-08	18.7	173	8.3	-
H9	539755	6989607	3305	219	0.42	60	10		10	10	10	10		70	10	10	06-Jul-09	18.6	126	8.1	100
H10	539658	6989562	375	77	0.11												01-Aug-08	22.1	193	8.5	-
H10	539658	6989562	375	77	0.11	60	5		5	10	20	30		60		10	06-Jul-09	23.1	184	7.3	100
H11	539559	6989529	1839	160	0.27												01-Aug-08	20.2	140	8.3	-
H11	539559	6989529	1839	160	0.25	80	10			5	5			50	20	30	06-Jul-09	19.9	142	5.7	103
H12	539435	6989597	8861	376	0.54												01-Aug-08	18.9	120	8.4	-
H12	539435	6989597	8861	376	0.81	20	10		20	30	20			70		30	06-Jul-09	15.5	119	7.9	92
H13	539214	6989623	32038	809	1.04												01-Aug-08	16.5	191	8.3	-
H13	539214	6989623	397	75	1.23	10	10		10	10	60	60		10		30	04-Jul-09	15.5	135	7.9	-
H13a	539117	6989841	419	76	0.26	90					10			90		10	04-Jul-09	23.9	220	8.7	-
H13c	538998	6989808	735	105	Dry												04-Jul-09	Dry	Dry	Dry	-
H13d	538835	6989773	429	81	0.28	60	10				30	10		80	10		04-Jul-09	24.3	189	7.0	-
H14	539018	6989892	2263	185	0.61												01-Aug-08	17.1	236	-	-
H14	539018	6989892	2263	185	0.46	70	10			10	10	10		20		70	04-Jul-09	21.6	167	8.8	-
H14a	539165	6990024	2415	195	0.37	60				10	30		10	40		50	04-Jul-09	21.8	72	8.1	-
H14b	539268	6990004	389	76	0.24	90				5	5	10		40		50	04-Jul-09	23.7	57	8.0	-
H14c	539233	6989832			0.12	50					20	30	100				04-Jul-09	23.0	157	9.0	-
H15	538850	6990014	11115	508	0.70												01-Aug-08	15.1	159	9.0	-
H15	538850	6990014	11115	508	0.83	30	10		10	30	20	30		10	10	50	04-Jul-09	19.6	107	8.2	-
H15a	538994	6990073	1242	143	0.20	60	10			10	20	50		30		20	04-Jul-09	24.5	233	8.6	-
H15b	538542	6989866	408	75	0.12	70	10			10	10			100			04-Jul-09	17.7	270	6.2	-
H15c	538748	6990130	414	79	0.37	100								100			04-Jul-09	18.8	147	8.0	-
H15d	538663	6990168	838	106	0.34	90	5		5					30		70	04-Jul-09	15.7	119	7.2	-
H15e	538820	6990241	2284	177	0.48	80	5				15		10	10	10	70	04-Jul-09	16.7	146	8.5	-
H15f	538726	6990324	618	94	0.37	30			5	5	60	70		30			04-Jul-09	18.6	187	8.3	-
H15g	538416	6990266	2669	199	0.44	80	10				10			20		80	03-Jul-09	21.8	66	7.6	-
H15h	538391	6990134	7312	358	0.42	20					80	70		15	15		03-Jul-09	23.5	166	8.1	-
H15i	538380	6990337	341	69	0.05	95	5							60		40	03-Jul-09	25.4	54	7.7	-
H15j	538345	6990286	486	81	0.15	95	5						5	95			03-Jul-09	25.0	91	6.9	-
H15k	538175	6990376	552	90	0.13	75				10	15	20		20		60	03-Jul-09	24.4	107	7.9	-
H15l	537985	6990384	497	83	0.16	70				15	15	20		20		60	03-Jul-09	27.6	201	7.9	-
H16	540455	6989685	1171	125	0.36												02-Aug-08	16.1	48	7.9	-
H16	540455	6989685	1171	125	0.34		30		20	40	10	10		20	10	60	07-Jul-09	21.9	31	7.0	103
H17	539843	6989901	158000	1968	1.40												01-Aug-08	18.4	89	8.3	-
H17	539843	6989901	158000	1968	1.70												05-Jul-09	16.0	55	7.0	104
H18	539571	6989751	7215	320	0.60												01-Aug-08	17.9	113	8.6	-
H18	539571	6989751	7215	320	0.67	40	10		10	20	20	20		50	10	20	06-Jul-09	18.6	110	7.8	93
H19	540615	6989134	27946	677	1.40												02-Aug-08	15.6	177	8.1	-
H20	540749	6988843	94656	1421	1.60												02-Aug-08	15.1	158	8.1	-

Appendix D9. Mean, minimum, and maximum daily water temperature (°C) in streams of the Meliadine Study Area, 1997 - 2000.

Day	Stream A0-1																																											
	Jul-1997			Aug-1997			Jun-1998			Jul-1998			Aug-1998			Sep-1998			Jun-1999			Jul-1999			Aug-1999			Sep-1999			Jun-2000			Jul-2000			Aug-2000			Sep-2000				
	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.					
1									12.2	10.8	14.0	17.8	15.1	21.0	8.5	7.5	9.8				12.2	10.8	13.9	13.9	10.8	17.4	5.6	5.2	6.1				5.1	4.0	6.8	16.5	13.1	20.0	4.6	2.9	6.5			
2									11.3	10.1	13.0	17.2	13.5	20.8	9.7	7.3	12.7				12.5	10.2	15.7	13.8	12.1	16.2	5.1	4.9	5.6				5.2	4.1	6.5	17.7	13.9	21.5	3.7	2.0	5.1			
3									13.4	10.3	16.3	13.4	11.4	15.5	9.1	7.8	10.2				12.4	10.3	14.9	11.7	10.1	13.8							5.5	4.4	7.6	17.4	15.5	20.0	6.1	2.7	9.7			
4									14.0	11.4	17.2	16.9	13.0	20.6	9.1	8.4	9.8				13.2	10.5	16.3	12.0	9.3	15.2							7.5	4.8	12.1	17.2	14.0	21.1	8.2	4.9	11.7			
5									15.0	11.5	18.8	17.5	14.9	19.2	9.4	8.3	11.1				15.3	13.3	17.4	11.5	10.1	13.3							9.0	4.7	13.9	17.9	14.8	21.5	9.0	6.6	11.3			
6									12.5	11.2	13.9	13.9	11.1	17.1	9.5	9.0	10.2				16.7	14.9	18.6	11.4	10.1	12.6							9.0	5.9	12.5	18.0	15.8	21.0	9.2	7.8	10.8			
7									14.8	10.3	19.5	11.3	9.8	12.9	9.2	8.4	9.9				16.8	14.8	19.1	11.1	10.2	12.1							10.7	7.1	14.5	16.3	14.4	19.2	8.6	6.7	9.6			
8									15.8	12.6	19.9	12.2	11.1	12.9	8.3	7.7	8.9				16.8	14.5	19.4	11.2	10.1	12.7							12.9	9.4	16.7	15.7	12.9	18.6	6.9	4.2	9.6			
9									15.5	12.0	18.1	12.7	10.3	15.5	9.9	8.3	12.0				16.1	14.9	17.5	13.5	9.8	17.7							15.0	12.2	18.2	15.3	12.9	18.6	7.2	6.3	8.4			
10									17.9	15.1	21.4	13.5	10.9	16.8	10.4	9.5	11.2				16.6	14.6	18.9	14.7	12.4	17.1							16.1	14.2	18.7	12.0	10.9	13.5	7.3	6.9	7.7			
11									16.9	14.6	20.5	11.5	9.9	13.2	10.3	9.6	11.2				13.0	12.1	14.2	15.4	12.9	18.1							15.8	13.1	18.6	11.1	10.0	13.0	7.6	6.8	8.7			
12						3.0	2.8	3.5	15.5	13.0	19.1	13.2	11.2	15.9	9.5	8.1	10.9				14.1	11.5	17.1	15.1	13.0	17.7							16.5	13.5	19.3	11.2	9.2	13.2	7.8	6.6	9.3			
13						3.0	2.5	3.8	14.8	11.7	18.3	14.0	11.1	16.6	9.2	7.7	10.9				13.9	12.4	15.4	14.2	12.7	16.0							15.7	13.5	18.2	10.7	9.6	12.0	7.5	6.6	8.2			
14						4.4	2.0	6.2	10.6	8.0	13.8	13.5	12.1	14.6	8.4	8.0	8.9				13.3	12.6	14.0	13.4	10.9	15.7							13.3	10.9	14.6	11.2	8.5	14.2	7.4	6.3	8.9			
15						5.8	4.0	7.8	7.8	6.7	8.6	12.7	10.6	14.9	7.4	6.4	8.1				12.9	11.4	14.9	13.9	10.9	16.6							11.1	9.8	12.8	11.9	9.8	14.4	5.2	4.4	5.7			
16						7.7	4.0	10.9	8.5	8.0	8.9	12.7	10.1	15.4	5.9	5.2	7.0				11.7	9.8	14.2	14.4	11.8	17.4							11.8	9.1	14.8	9.2	7.8	10.7	6.4	5.0	8.2			
17						9.3	6.7	11.7	10.2	8.0	12.9	14.1	11.8	16.8	5.6	5.0	6.4				10.3	8.3	12.3	14.9	12.6	17.8							12.9	9.7	16.3	9.7	7.5	12.2	4.5	3.1	5.9			
18						9.1	5.0	12.3	10.5	9.5	12.1	15.2	11.8	18.8	5.3	4.6	6.4				10.9	8.3	13.9	11.7	10.9	13.0							14.7	11.3	18.5	10.1	6.9	13.5	3.5	2.1	5.4			
19						7.1	5.2	9.2	10.0	9.0	10.9	15.8	12.3	19.5	5.2	4.9	5.9	6.5	5.0	7.7	12.9	10.1	16.5	12.9	10.2	15.9							16.1	12.5	19.8	10.9	9.0	13.3	3.1	1.3	5.2			
20						7.1	4.7	9.8	10.3	9.0	11.7	8.3	5.8	12.0	5.1	4.4	5.8	5.5	4.0	8.1	12.6	11.1	13.6	12.7	9.9	14.5							17.6	13.9	21.3	10.4	8.8	11.9	2.2	1.3	2.9			
21						8.3	5.2	12.6	10.3	9.2	11.8	8.2	5.2	11.5	5.5	4.9	6.5	3.9	2.8	5.8	13.6	9.9	17.1	9.7	8.0	12.1							2.9	2.0	3.4	19.0	15.9	22.1	9.4	7.9	10.5	0.6	-0.1	1.4
22						6.3	2.6	9.2	13.3	9.6	17.2	10.1	8.0	12.6	5.2	4.3	6.4	6.0	3.1	8.6	13.9	11.8	15.7	9.2	7.1	11.7							2.6	1.6	3.8	18.1	15.7	20.9	10.9	9.7	12.5	0.8	-0.1	1.9
23						7.6	2.2	11.8	15.6	11.7	19.2	11.5	8.6	15.1	5.0	4.3	6.1	5.0	4.1	6.1	15.9	12.3	19.7	9.0	8.0	10.1							3.1	1.6	5.0	16.7	13.3	20.5	10.1	9.5	10.5	1.3	0.7	1.9
24						10.0	8.1	12.0	17.1	13.3	20.6	11.2	8.7	14.5	4.2	3.5	4.7	4.0	3.7	4.4	14.2	12.3	16.5	7.8	7.0	9.2							3.4	2.5	4.2	17.4	14.4	21.1	10.3	9.6	11.2	0.3	-0.1	1.3
25						11.1	8.3	14.2	16.9	14.8	19.4	9.4	8.3	10.5	2.9	2.2	3.5	5.1	3.7	7.0	13.1	10.8	16.3	8.8	5.8	12.1							3.7	2.9	4.9	17.9	14.4	21.5	9.4	6.9	10.3	0.0	-0.1	0.1
26						12.9	9.8	16.6	13.7	12.3	14.8	9.2	7.8	10.6	2.5	1.6	3.7	7.3	5.8	9.0	8.5	7.1	12.0	8.3	7.7	9.8							2.9	2.6	3.6	19.1	15.4	23.7	7.1	5.6	9.1			
27						13.2	9.9	16.8	13.8	11.7	17.1	8.8	8.0	9.8	2.9	1.9	4.3	9.7	7.7	12.1	8.7	7.1	10.6	8.2	7.5	8.7							3.2	2.4	4.3	19.6	16.5	23.5	6.5	4.5	8.6			
28						14.0	10.9	17.7	15.5	11.8	19.4	8.0	7.4	8.6	3.4	2.6	4.7	11.9	10.2	14.2	9.1	8.3	10.2	7.5	6.2	8.4							5.4	4.2	7.3	16.1	14.2	17.9	7.8	6.1	9.6			
29						14.2	11.8	17.4	16.7	14.3	19.2	8.6	7.5	9.8	2.9	2.3	4.0	12.8	10.8	15.7	9.6	8.4	10.6	7.7	6.7	8.6							5.3	4.1	6.5	16.5	13.0	21.1	6.9	5.3	8.3			
30						13.9	11.5	16.6	16.8	13.9	19.7	9.7	8.3	11.4	2.5	2.2	2.8	12.9	11.7	14.8	10.9	8.7	13.5	8.2	7.5	8.9							4.8	3.8	6.3	15.6	13.6	17.3	4.2	3.3	5.2			
31						18.3	15.7	21.1	18.3	15.7	21.1	8.6	7.8	9.5							12.7	9.3	16.0	6.8	6.1	7.5							14.8	11.6	18.2	3.8	2.7	5.3						
Total						8.8	2.0	17.7	13.7	6.7	21.4	12.3	5.2	21.0	6.7	1.6	12.7	7.6	2.8	15.7	13.0	7.1	19.7	11.4	5.8	18.1	5.4	4.9	6.1	3.7	1.6	7.3	13.9	4.0	23.7	11.5	2.7	21.5	6.2	-0.1	11.7			

Day	Stream B1-2																																									
	Jul-1997			Aug-1997			Jun-1998			Jul-1998			Aug-1998			Sep-1998			Jun-1999			Jul-1999			Aug-1999			Sep-1999			Jun-2000			Jul-2000			Aug-2000			Sep-2000		
	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.	Mean	Min.	Max.			
1									10.8	9.6	12.4	17.6	15.9	19.7	8.5	7.8	9.5				10.4	9.6	11.1	13.7	11.8	16.0	5.7	5.3	6.1				3.1	2.4	3.8	16.6	14.4	19.4	5.0	3.8	6.6	
2									10.8	9.6	12.1	17.2	13.6	20.2	9.3	7.5	12.1				11.0	9.9	12.1	13.5	12.1	15.2	5.1	4.7	5.8				3.7	2.6	5.2	17.4	15.6	19.3	4.1	2.8	5.3	
3									12.7	9.9	15.2	14.7	12.7	16.5	9.2	8.4	10.1				11.4	10.6	12.3	11.9	10.8	13.8							4.0	2.6	6.3	17.1	15.7	18.7	5.9	3.2	9.4	
4									13.4	11.1	15.7	16.8	14.8	18.8	9.2	8.7	9.6				12.1	10.8	13.2	12.1	9.9	14.6							4.6	3.1	6.8	17.3	15.5	19.2	7.1	4.6	10.0	
5									13.9	12.0	15.4	17.1	14.8	18.4	9.6	8.4	11.2				14.4	12.3	17.2	11.5	10.6																	

Appendix D11. Comparison of near surface and near bottom water temperatures (°C) in the east basin of Meliadine Lake (Site ML-E), Jul-Sep 1998.

Date ^a	Near Surface (1 m depth)			Near Bottom (14 m depth)			Mean Difference (surf - bot)
	Mean	Minimum	Maximum	Mean	Minimum	Maximum	
28-Jul-98	13.7	13.6	14.0	12.8	12.8	12.8	0.9
29-Jul-98	13.7	13.5	14.0	13.1	12.8	13.5	0.6
30-Jul-98	13.7	13.5	14.0	13.5	13.1	13.8	0.2
31-Jul-98	14.2	13.9	14.5	13.9	13.7	14.0	0.3
01-Aug-98	14.4	14.2	14.8	14.3	13.7	14.7	0.2
02-Aug-98	14.9	14.6	15.1	14.7	14.5	15.1	0.1
03-Aug-98	14.8	14.6	14.9	14.7	14.7	14.8	0.1
04-Aug-98	15.1	14.8	15.4	14.8	14.7	15.1	0.2
05-Aug-98	15.6	15.4	15.9	15.0	14.7	15.4	0.6
06-Aug-98	15.3	15.1	15.6	15.2	15.1	15.4	0.1
07-Aug-98	14.7	14.5	15.2	14.7	14.4	15.1	0.1
08-Aug-98	14.4	14.2	14.6	14.3	14.2	14.5	0.1
09-Aug-98	14.2	14.0	14.3	14.1	14.0	14.2	0.1
10-Aug-98	14.1	14.0	14.3	14.1	14.0	14.2	0.1
11-Aug-98	13.8	13.7	14.2	13.8	13.5	14.2	0.0
12-Aug-98	13.7	13.6	13.9	13.7	13.5	13.8	0.0
13-Aug-98	13.8	13.6	14.0	13.8	13.7	14.0	0.0
14-Aug-98	13.9	13.7	13.9	13.9	13.8	14.0	0.0
15-Aug-98	13.7	13.6	13.9	13.7	13.7	13.8	0.0
16-Aug-98	13.7	13.6	14.0	13.6	13.5	13.7	0.1
17-Aug-98	13.9	13.7	14.0	13.7	13.5	14.0	0.2
18-Aug-98	14.0	13.7	14.3	13.9	13.7	14.1	0.1
19-Aug-98	14.3	14.2	14.5	14.2	14.1	14.5	0.1
20-Aug-98	13.7	12.9	14.5	13.7	12.9	14.4	0.0
21-Aug-98	12.3	12.0	12.9	12.2	11.9	12.9	0.1
22-Aug-98	12.0	11.8	12.4	11.7	11.6	11.9	0.3
23-Aug-98	11.9	11.7	12.1	11.7	11.6	11.9	0.2
24-Aug-98	12.0	11.8	12.3	11.8	11.7	12.0	0.2
25-Aug-98	11.8	11.7	12.0	11.7	11.6	11.9	0.1
26-Aug-98	11.6	11.4	11.7	11.5	11.3	11.7	0.1
27-Aug-98	11.3	11.1	11.5	11.3	11.0	11.4	0.0
28-Aug-98	10.8	10.5	11.1	10.8	10.5	11.1	0.1
29-Aug-98	10.5	10.3	10.6	10.4	10.4	10.5	0.1
30-Aug-98	10.5	10.3	10.6	10.4	10.3	10.5	0.1
31-Aug-98	10.3	10.2	10.5	10.4	10.3	10.5	-0.1
01-Sep-98	10.1	9.9	10.2	10.1	10.0	10.3	0.0
02-Sep-98	10.1	9.9	10.5	10.0	10.0	10.1	0.1
03-Sep-98	10.0	9.9	10.2	10.1	10.0	10.1	0.0
04-Sep-98	10.0	9.9	10.0	10.0	10.0	10.1	0.0
28 Jul - 4 Sep	13.0	9.9	15.9	12.9	10.0	15.4	0.1

^a thermographs were suspended in the water column from 16:30 h on 28 Jul 1998 until 10:30 h on 4 Sep 1998.

Appendix D12. Mean, minimum, and maximum daily water temperature (°C) at the narrows between the east and central basins of Meliadine Lake, Sep 1997 to Jun 1998

Date	at 1.5 m depth				at 0.8 m depth			
	Logger #1		Logger #2		Logger #3		Logger #4	
	Mean	Min. Max.	Mean	Min. Max.	Mean	Min. Max.	Mean	Min. Max.
13-Sep-97	7.3	7.1 7.4	7.2	7.1 7.4	7.4	7.1 7.5	7.4	7.3 7.5
14-Sep-97	6.9	6.4 7.1	6.9	6.6 7.1	7.0	6.1 7.3	6.9	6.5 7.3
15-Sep-97	6.4	6.1 6.8	6.4	6.0 6.7	6.5	6.1 6.8	6.4	5.9 6.8
16-Sep-97	7.0	6.4 7.7	7.0	6.3 7.6	7.0	6.4 7.8	7.0	6.4 7.7
17-Sep-97	6.1	5.5 6.8	6.0	5.4 6.9	6.2	5.5 7.0	6.1	5.5 7.0
18-Sep-97	4.9	4.3 5.5	4.9	3.9 5.7	4.9	4.1 5.5	4.9	4.0 5.5
19-Sep-97	3.7	3.4 4.1	3.7	3.3 4.2	3.7	3.4 4.1	3.7	3.2 4.1
20-Sep-97	3.5	3.1 4.1	3.5	3.0 4.0	3.5	2.9 4.1	3.4	2.9 4.0
21-Sep-97	3.6	3.1 3.8	3.6	3.1 3.9	3.6	3.2 3.8	3.6	3.1 3.8
22-Sep-97	3.5	3.2 3.7	3.5	3.1 3.9	3.5	3.2 3.8	3.5	3.1 3.8
23-Sep-97	3.8	3.4 4.3	3.7	3.3 4.2	3.8	3.2 4.4	3.8	3.2 4.4
24-Sep-97	4.3	3.8 4.6	4.3	3.7 4.5	4.2	3.8 4.6	4.2	3.8 4.6
25-Sep-97	4.4	4.1 4.7	4.4	4.2 4.6	4.5	4.3 4.7	4.5	4.1 4.7
26-Sep-97	4.5	4.4 4.6	4.5	4.3 4.5	4.5	4.3 4.6	4.5	4.3 4.6
27-Sep-97	4.7	4.4 4.9	4.7	4.3 4.8	4.7	4.6 5.0	4.7	4.4 5.0
28-Sep-97	4.2	3.8 4.6	4.2	3.7 4.6	4.3	3.8 4.7	4.2	3.7 4.6
29-Sep-97	3.2	2.8 3.7	3.2	2.7 3.6	3.2	2.8 3.7	3.2	2.8 3.7
30-Sep-97	2.9	2.6 3.2	2.8	2.7 3.1	2.9	2.5 3.2	2.8	2.5 3.2
01-Oct-97	2.9	2.5 3.1	2.9	2.5 3.1	2.9	2.5 3.2	2.9	2.5 3.2
02-Oct-97	3.2	2.9 3.5	3.2	2.8 3.6	3.2	2.9 3.7	3.2	2.9 3.7
03-Oct-97	3.3	3.2 3.4	3.3	3.1 3.4	3.3	3.1 3.4	3.3	3.1 3.4
04-Oct-97	3.6	3.4 3.7	3.5	3.3 3.7	3.6	3.4 3.8	3.6	3.4 3.7
05-Oct-97	3.4	3.1 3.7	3.5	3.1 3.6	3.5	3.2 3.7	3.4	3.1 3.5
06-Oct-97	2.5	1.9 3.2	2.5	2.1 3.1	2.5	2.0 3.2	2.5	1.7 3.1
07-Oct-97	1.6	1.3 1.9	1.6	1.3 1.8	1.6	1.3 2.0	1.5	1.1 1.7
08-Oct-97	1.6	1.4 1.9	1.6	1.3 1.8	1.6	1.3 1.9	1.6	1.3 1.7
09-Oct-97	0.5	-0.1 1.4	0.5	-0.4 1.3	0.5	-0.1 1.4	0.5	-0.1 1.4
10-Oct-97	0.0	-0.3 0.0	0.0	-0.2 0.1	0.0	0.0 0.2	0.0	-0.1 0.0
11-Oct-97	0.4	0.2 0.5	0.4	0.1 0.6	0.4	0.2 0.7	0.4	0.2 0.5
12-Oct-97	0.5	0.4 0.7	0.5	0.3 0.7	0.5	0.4 0.7	0.5	0.4 0.7
13-Oct-97	0.5	0.4 0.7	0.5	0.3 0.6	0.5	0.4 0.7	0.5	0.4 0.5
14-Oct-97	0.3	0.2 0.4	0.3	0.1 0.4	0.3	0.2 0.4	0.3	0.2 0.4
15-Oct-97	0.2	0.0 0.4	0.2	0.0 0.4	0.2	0.0 0.4	0.2	-0.1 0.4
16-Oct-97	0.5	0.4 0.7	0.5	0.3 0.6	0.5	0.4 0.7	0.5	0.4 0.7
17-Oct-97	0.4	0.2 0.5	0.4	0.0 0.6	0.4	0.2 0.7	0.4	0.2 0.5
18-Oct-97	0.4	0.0 0.7	0.3	0.0 0.7	0.4	0.2 0.5	0.3	0.0 0.5
19-Oct-97	0.6	0.4 0.8	0.6	0.3 0.9	0.6	0.4 0.8	0.6	0.4 0.8
20-Oct-97	0.6	0.4 0.8	0.6	0.3 0.7	0.6	0.5 0.8	0.5	0.4 0.8
21-Oct-97	0.7	0.5 0.8	0.7	0.4 0.9	0.6	0.5 0.8	0.6	0.5 0.8
22-Oct-97	0.7	0.5 1.0	0.7	0.4 0.9	0.6	0.5 1.0	0.6	0.5 0.8
23-Oct-97	0.7	0.5 1.0	0.6	0.4 1.0	0.7	0.5 1.0	0.6	0.5 1.0
24-Oct-97	0.9	0.7 1.0	0.8	0.6 1.0	0.8	0.7 1.0	0.8	0.5 1.0
25-Oct-97	1.0	0.7 1.1	0.9	0.7 1.2	1.0	0.7 1.1	1.0	0.7 1.0
26-Oct-97	0.9	0.7 1.1	0.9	0.6 1.0	0.9	0.7 1.1	0.8	0.7 1.0
27-Oct-97	0.8	0.7 1.1	0.8	0.6 1.0	0.8	0.7 1.0	0.8	0.7 1.0
28-Oct-97	0.7	0.7 0.8	0.7	0.6 0.9	0.7	0.7 0.7	0.7	0.5 0.7
29-Oct-97	1.0	0.7 1.1	1.0	0.6 1.2	0.9	0.7 1.1	0.9	0.5 1.1
30-Oct-97	0.9	0.7 1.1	0.8	0.4 1.2	0.9	0.5 1.1	0.8	0.5 1.1
31-Oct-97	0.8	0.7 1.0	0.8	0.6 1.0	0.7	0.5 1.0	0.7	0.5 1.0
01-Nov-97	0.6	0.5 1.0	0.6	0.4 0.9	0.7	0.5 1.0	0.6	0.5 0.8
02-Nov-97	0.7	0.5 1.1	0.7	0.4 1.0	0.6	0.5 1.0	0.6	0.4 1.0
03-Nov-97	0.9	0.5 1.1	0.9	0.6 1.2	0.8	0.5 1.1	0.8	0.5 1.1
04-Nov-97	0.9	0.5 1.1	0.8	0.6 1.0	0.9	0.7 1.1	0.8	0.5 1.1
05-Nov-97	0.9	0.5 1.1	0.8	0.4 1.2	0.8	0.5 1.1	0.8	0.5 1.1
06-Nov-97	0.7	0.5 1.1	0.7	0.4 1.0	0.7	0.5 1.0	0.7	0.5 1.0
07-Nov-97	0.7	0.5 1.0	0.6	0.4 1.0	0.7	0.5 1.0	0.6	0.5 1.0
08-Nov-97	0.9	0.5 1.0	0.8	0.4 1.0	0.8	0.5 1.0	0.8	0.5 1.0
09-Nov-97	0.6	0.4 1.0	0.6	0.3 0.9	0.6	0.5 0.7	0.5	0.4 0.7
10-Nov-97	0.8	0.4 1.1	0.8	0.4 1.2	0.7	0.4 1.0	0.7	0.4 1.0
11-Nov-97	0.8	0.5 1.1	0.8	0.4 1.2	0.8	0.5 1.0	0.8	0.5 1.1
12-Nov-97	0.6	0.5 0.8	0.6	0.4 0.9	0.6	0.5 0.7	0.5	0.5 0.7
13-Nov-97	0.8	0.5 1.1	0.8	0.4 1.2	0.7	0.5 1.0	0.7	0.5 1.0
14-Nov-97	0.6	0.4 1.1	0.6	0.4 1.0	0.6	0.4 1.0	0.6	0.4 1.0
15-Nov-97	0.6	0.4 1.0	0.6	0.4 1.0	0.5	0.4 0.8	0.5	0.4 0.8
16-Nov-97	0.4	0.4 0.8	0.4	0.3 0.7	0.4	0.4 0.5	0.4	0.4 0.5
17-Nov-97	0.6	0.4 1.1	0.6	0.3 1.0	0.6	0.4 1.0	0.6	0.4 1.0
18-Nov-97	0.6	0.4 1.0	0.5	0.3 0.9	0.5	0.4 0.8	0.4	0.2 0.8
19-Nov-97	0.6	0.4 1.0	0.5	0.3 0.9	0.5	0.4 0.8	0.5	0.4 0.7
20-Nov-97	0.7	0.4 1.0	0.7	0.3 1.0	0.6	0.4 1.0	0.6	0.2 0.8
21-Nov-97	0.8	0.5 1.1	0.8	0.4 1.2	0.7	0.4 1.0	0.6	0.4 1.0
22-Nov-97	0.8	0.5 1.1	0.8	0.6 1.0	0.7	0.5 1.0	0.7	0.5 1.0
23-Nov-97	0.5	0.4 0.8	0.4	0.3 0.7	0.5	0.3 0.9	0.4	0.4 0.5
24-Nov-97	0.6	0.4 1.0	0.6	0.3 1.0	0.6	0.4 0.8	0.6	0.4 0.8
25-Nov-97	0.5	0.2 0.8	0.5	0.3 0.9	0.4	0.2 0.7	0.4	0.2 0.7
26-Nov-97	0.8	0.4 1.1	0.8	0.3 1.2	0.7	0.4 1.0	0.7	0.4 0.8
27-Nov-97	0.7	0.4 1.1	0.6	0.3 1.0	0.6	0.4 1.0	0.5	0.4 0.8
28-Nov-97	0.5	0.4 0.8	0.5	0.3 0.9	0.4	0.4 0.7	0.4	0.4 0.5
29-Nov-97	0.6	0.4 1.0	0.6	0.3 1.0	0.6	0.4 0.8	0.6	0.4 0.8
30-Nov-97	0.7	0.4 1.0	0.7	0.4 0.9	0.6	0.4 0.8	0.6	0.2 0.8
01-Dec-97	0.8	0.4 1.1	0.8	0.4 1.2	0.8	0.4 1.0	0.7	0.4 1.0
02-Dec-97	0.4	0.4 0.4	0.4	0.3 0.4	0.4	0.4 0.4	0.4	0.4 0.4
03-Dec-97	0.3	0.2 0.4	0.3	0.3 0.4	0.3	0.2 0.4	0.3	0.2 0.4
04-Dec-97	0.5	0.2 1.0	0.5	0.3 0.9	0.4	0.2 0.7	0.4	0.2 0.7
05-Dec-97	0.8	0.4 1.0	0.8	0.4 1.0	0.7	0.4 1.0	0.7	0.4 1.0
06-Dec-97	0.6	0.4 0.8	0.5	0.3 0.9	0.5	0.4 0.8	0.5	0.4 0.7
07-Dec-97	0.8	0.4 1.0	0.8	0.4 1.0	0.7	0.4 0.8	0.7	0.4 0.8
08-Dec-97	0.4	0.2 0.5	0.4	0.3 0.4	0.4	0.2 0.4	0.3	0.2 0.4
09-Dec-97	0.6	0.2 1.0	0.7	0.3 1.0	0.5	0.2 0.8	0.5	0.2 0.8
10-Dec-97	0.5	0.4 0.8	0.5	0.3 0.9	0.5	0.4 0.7	0.5	0.4 0.7
11-Dec-97	0.4	0.2 0.8	0.4	0.3 0.9	0.4	0.2 0.7	0.4	0.2 0.7
12-Dec-97	0.5	0.2 1.0	0.5	0.1 0.9	0.4	0.2 0.8	0.4	0.2 0.7
13-Dec-97	0.4	0.2 0.8	0.3	0.1 0.7	0.3	0.2 0.5	0.3	0.2 0.5
14-Dec-97	0.7	0.4 1.0	0.7	0.3 1.0	0.6	0.4 0.8	0.6	0.4 0.8
15-Dec-97	0.3	0.2 0.4	0.3	0.1 0.4	0.4	0.2 0.4	0.2	0.2 0.4
16-Dec-97	0.3	0.2 0.4	0.3	0.1 0.4	0.3	0.2 0.4	0.2	0.2 0.4
17-Dec-97	0.3	0.2 0.5	0.3	0.1 0.6	0.2	0.2 0.4	0.2	0.2 0.4
18-Dec-97	0.3	0.2 0.5	0.3	0.1 0.6	0.3	0.2 0.4	0.3	0.2 0.4
19-Dec-97	0.7	0.4 1.0	0.7	0.3 0.9	0.6	0.2 0.8	0.5	0.2 0.8
20-Dec-97	0.3	0.2 0.4	0.3	0.1 0.4	0.3	0.2 0.4	0.2	0.2 0.2
21-Dec-97	0.5	0.2 0.8	0.6	0.1 0.9	0.4	0.2 0.7	0.4	0.0 0.7
22-Dec-97	0.5	0.2 0.8	0.5	0.3 0.9	0.5	0.2 0.7	0.5	0.2 0.7
23-Dec-97	0.3	0.2 0.4	0.3	0.1 0.4	0.2	0.2 0.4	0.2	0.2 0.4
24-Dec-97	0.4	0.2 0.7	0.4	0.3 0.7	0.4	0.2 0.5	0.3	0.2 0.5
25-Dec-97	0.3	0.2 0.5	0.3	0.0 0.6	0.2	0.2 0.2	0.2	0.0 0.2
26-Dec-97	0.3	0.0 0.5	0.2	0.0 0.4	0.2	0.2 0.2	0.1	0.0 0.2
27-Dec-97	0.1	0.0 0.4	0.1	0.0 0.4	0.1	0.0 0.2	0.0	0.0 0.0
28-Dec-97	0.2	0.0 0.5	0.2	0.0 0.6	0.1	0.0 0.4	0.1	0.0 0.4
29-Dec-97	0.0	0.0 0.2	0.1	0.0 0.3	0.0	0.0 0.0	0.0	0.0 0.0
30-Dec-97	0.5	0.2 0.7	0.4	0.1 0.7	0.3	0.0 0.5	0.2	0.0 0.5
31-Dec-97	0.4	0.2 0.7	0.4	0.1 0.7	0.3	0.2 0.5	0.3	0.2 0.5
01-Jan-98	0.6	0.4 0.8	0.6	0.4 0.7	0.5	0.2 0.7	0.4	0.2 0.7
02-Jan-98	0.6	0.4 0.8	0.6	0.3 0.9	0.5	0.2 0.7	0.5	0.2 0.7
03-Jan-98	0.3	0.2 0.5	0.3	0.1 0.3	0.2	0.2 0.4	0.2	0.0 0.2
04-Jan-98	0.2	0.0 0.2	0.2	0.1 0.3	0.0	0.0 0.2	0.0	0.0 0.0
05-Jan-98	0.3	0.0 0.5	0.3	0.0 0.4	0.1	0.0 0.2	0.1	0.0 0.2
06-Jan-98	0.3	0.0 0.5	0.3	0.0 0.6	0.2	0.0 0.2	0.1	0.0 0.2
07-Jan-98	0.2	0.0 0.5	0.2	0.0 0.4	0.0	0.0 0.2	0.0	0.0 0.2
08-Jan-98	0.1	0.0 0.2	0.2	0.1 0.3	0.0	0.0 0.0	0.0	0.0 0.0
09-Jan-98	0.3	0.2 0.5	0.3	0.1 0.6	0.2	0.0 0.2	0.2	0.0 0.2
10-Jan-98	0.2	0.0 0.4	0.2	0.0 0.4	0.1	0.0 0.2	0.0	0.0 0.2
11-Jan-98	0.4	0.2 0.5	0.4	0.1 0.6	0.1	0.0 0.2	0.1	0.0 0.2
12-Jan-98	0.2	0.2 0.4	0.2	0.0 0.3	0.1	0.0 0.2	0.0	0.0 0.2
13-Jan-98	0.1	0.0 0.2	0.1	0.0 0.3	0.0	0.0 0.2	0.0	0.0 0.0
14-Jan-98	0.2	0.0 0.4	0.2	0.0 0.4	0.0	0.0 0.0	0.0	0.0 0.0
15-Jan-98	0.0	0.0 0.2	0.1	0.0 0.1	0.0	-0.1 0.0	0.0	0.0 0.0
16-Jan-98	0.1	0.0 0.4	0.2	0.0 0.3	-0.2	-0.3 -0.1	0.0</	

Appendix D13. Vertical profiles of water temperature and dissolved oxygen concentrations in lakes within the Meliadine Study Area, 1997 - 1999.

Parameter	A1	A6					A8					B2					B5				
Date	23-Aug-97	23-Jul-97	17-Aug-97	25-Apr-98	24-Jul-98	18-Jul-99	22-Jul-97	18-Aug-97	26-Apr-98	23-Jul-98	21-Jul-97	18-Aug-97	26-Apr-98	21-Jul-98	30-Aug-98	18-Jul-99	19-Jul-97	18-Aug-97	26-Apr-98	20-Jul-98	
Time	09:30	13:00	17:00	15:30	12:20	08:30	14:00	10:00	09:30	12:00	14:00	13:30	12:30	12:00	10:30	17:30	10:00	17:00	16:30	10:30	
UTM (NAD 27)	Easting	544360	541777	541816	542016	541777	541780	541780	540102	540123	537540	537441	537430	537540	537441	537540	537794	537799	538007	537794	
Zone 15V	Northing	6985425	6985645	6985549	6985773	6985645	6985850	6987122	6987096	6987247	6987122	6986964	6986909	6986373	6986964	6986500	6988576	6988532	6988418	6988576	
pH	8.09	7.85	7.86	6.83	7.37	110.70	8.38	7.87	7.73	7.73	8.07	7.84	6.92	n.d.	7.13	97.10	7.54	7.67	6.84	n.d.	
Conductivity (µS/cm)	150.3	92.8	101.9	300	84.8	84.8	95.5	103.7	320	93.3	101.7	109.9	433	71.5	87.0	71.5	81.8	89.5	674	73.8	
Total Depth (m)	1.8	2.5	2.5	3.8	3.9	4.0	3.6	3.4	3.0	2.8	2.6	2.5	2.5	3.0	3.0	3.0	2.7	2.3	2.2	2.0	
Ice Thickness (m)				1.7					1.8				1.8						1.8		
Snow Cover (m)				0.2					0.2				0.2						0.2		
Secchi Transparency (m)	>1.8	>2.5	>2.5	n.d.	>3.9	2.5	>3.6	>3.4	n.d.	>2.8	>2.6	>2.5	n.d.	>3.0	2.8	2.5	>2.7	>2.3	n.d.	>2.0	
Water Temperature (°C)	0.1 m	14.7	19.0	15.7	0.0	15.1	9.8	17.7	14.2	-0.2	12.7	17.4	15.3	-0.2	9.7	8.9	11.1	15.1	15.1	-0.2	10.0
	0.5 m	14.8	18.9	15.5		14.8	9.8		14.3		12.5	17.1	15.0	-0.2	9.7	8.9	11.0	15.1	15.1	-0.2	9.9
	1.0 m	14.8	18.8	15.3	0.3	14.5	9.8	17.5	14.3	-0.1	12.4	16.6	14.9	-0.2	9.7	8.9	10.9	15.1	15.1	-0.2	9.9
	1.5 m	14.9	18.8	15.2		14.4	9.9		14.3		12.4	16.3	14.9	-0.1	9.7	8.9	10.9	15.1	15.1	-0.2	9.9
	2.0 m		18.4	15.1	0.9	14.4	9.9	17.1	14.3	0.5	12.3	16.1	14.8	0.1	9.7	8.9	10.9	15.1	15.1	0.0	9.9
	2.5 m		18.2			14.3	9.9		14.3	1.8	12.3	16.0		0.8 ^a	9.7	8.9	10.9	15.1			
	3.0 m				1.9	14.3	9.9	16.6	14.2						9.8		10.9				
	3.5 m				2.1	14.3	9.9	16.4													
	4.0 m						9.9														
	5.0 m																				
	6.0 m																				
	7.0 m																				
	8.0 m																				
	9.0 m																				
	10.0 m																				
	11.0 m																				
	12.0 m																				
	13.0 m																				
	14.0 m																				
	15.0 m																				
	16.0 m																				
	17.0 m																				
	18.0 m																				
Dissolved Oxygen (mg/L)	0.1 m	10.0	10.3	11.4	3.4	12.8	11.3	9.9	11.0	4.5	13.7	9.7	11.0	4.2	13.8	11.0	11.8	10.5	10.9	3.2	13.9
	0.5 m	9.9	10.0	11.5		12.7	11.2		11.0		13.6	9.7	11.2	4.1	13.4	11.1	11.9	10.9	10.9	3.0	13.9
	1.0 m	9.8	10.1	11.5	3.2	13.1	11.1	9.9	10.9	4.3	13.7	9.7	11.2	3.9	13.4	11.1	11.9	10.4	10.8	2.9	13.9
	1.5 m	9.8	10.2	11.5		12.9	11.1		10.8		13.5	9.9	11.2	3.7	13.3	11.1	11.8	10.6	10.8	2.7	14.0
	2.0 m		10.5	11.6	2.9	12.7	11.1	10.0	10.8	3.8	13.5	10.1	11.4	3.6	13.3	11.1	11.8	10.6	10.8	2.6	13.8
	2.5 m		10.6			12.7	11.1		10.9	2.0	13.3	10.2		3.5 ^a	13.3	11.3	11.9	10.5			
	3.0 m				1.0	12.6	11.1	9.9	10.8						13.3		11.7				
	3.5 m				0.7	12.6	11.1	10.0													
	4.0 m						10.9														
	5.0 m																				
	6.0 m																				
	7.0 m																				
	8.0 m																				
	9.0 m																				
	10.0 m																				
	11.0 m																				
	12.0 m																				
	13.0 m																				
	14.0 m																				
	15.0 m																				
	16.0 m																				
	17.0 m																				
	18.0 m																				

shading = under-ice profiles n.d. = not determined

^a at 2.3 m

Appendix D13. Vertical profiles of water temperature and dissolved oxygen concentrations in lakes within the Meliadine Study Area, 1997 - 1999.

Parameter	B5		B7				D1		D7			G2		Control		ML-E						
	Date Time	28-Aug-98 11:00	18-Jul-99 12:30	18-Jul-97 13:30	19-Aug-97 10:00	27-Apr-98 15:00	19-Jul-98 12:15	22-Aug-98 21:00	19-Aug-97 16:30	27-Apr-98 13:00	17-Jul-97 17:00	19-Aug-97 14:00	27-Apr-98 17:00	24-Jul-97 16:30	22-Aug-97 16:30	26-Jul-98 11:45	19-Jul-99 15:30	19-Jul-97 15:30	17-Aug-97 10:00	25-Apr-98 13:30	17-Jul-98 11:45	04-Sep-98 11:00
UTM (NAD 27) Zone 15V Easting Northing	537799 6988532	537850 6988580	537685 6989544	537701 6989443	537749 6989506	537685 6989544	537701 6989443	533066 6989437	533035 6989527	536724 6988687	536774 6988690	536649 6988572	538579 6990582	538611 6990476	534670 6986510	534670 6986510	542941 6988744	543003 6988672	543271 6988364	543271 6988364	543271 6988364	
pH	7.36	87.40	7.41	7.94	7.00	n.d.	7.67	8.14	7.05	7.97	8.10	7.16	7.83	7.91	6.90	73.10	7.30	7.39	6.17	n.d.	7.04	
Conductivity (µS/cm)	94.8	73.8	84.0	92.2	278	76.0	84.7	134.9	1816	136.4	150.6	845	67.4	74.5	79.7	79.7	59.3	59.4	101	56.8	62.2	
Total Depth (m)	2.9	2.0	3.2	3.8	3.2	3.5	3.8	2.2	1.7	2.2	2.2	2.3	2.3	2.1	4.3	4.2	14.7	13.0	11.5	11.2	13.7	
Ice Thickness (m)					1.8				1.5			1.8							1.8			
Snow Cover (m)					0.2				0.6			1.0							0.3			
Secchi Transparency (m)	>2.9	<2.0	>3.2	>3.8	n.d.	>3.5	3.0	>2.2	n.d.	>2.2	>2.2	n.d.	>2.3	>2.1	>4.3	3.0	7.5	6.7	n.d.	5.0	4.5	
Water Temperature (°C)	0.1 m	8.9	10.5	14.3	15.1	-0.1	9.7	10.3	16.7	-0.2	14.0	15.8	-0.2	17.4	16.0	14.5	12.6	13.9	15.3	-0.2	9.9	9.7
	0.5 m	8.9	10.4		14.8		9.7	10.2	16.4	-0.2	14.0	15.6		17.3	16.0	14.6	12.4					
	1.0 m	8.9	10.3	14.3	14.7	0.0	9.7	9.9	16.1	-0.2	14.0	15.4	-0.1	17.3	16.0	14.6	12.1	13.9	13.6	-0.2	9.9	9.7
	1.5 m	8.9	10.2		14.5		9.7	9.9	15.8	-0.2	13.9	15.3		17.3	16.0	14.7	12.0					
	2.0 m	8.9	10.2	14.3	14.5	0.6	9.7	9.8	15.7		13.5	15.2	0.3	17.3	16.0	14.7	12.0	13.8	12.8	0.0	9.9	9.7
	2.5 m	8.9			14.4		9.7	9.8								14.7	11.9					
	3.0 m			14.3	14.4	1.7	9.7	9.7								14.7	11.9	13.8	12.5	1.4	9.9	9.7
	3.5 m				14.3		9.7	9.6								14.7	11.9					
	4.0 m														14.7	11.9	13.8	12.0	2.0	9.9	9.7	
	5.0 m																13.8	11.8	2.2	9.9	9.7	
	6.0 m																13.7	11.6	2.5	9.9	9.7	
	7.0 m																13.7	11.5	2.6	9.9	9.7	
	8.0 m																13.7	11.4	2.7	9.9	9.7	
	9.0 m																13.7	11.4	2.8	9.9	9.7	
	10.0 m																	13.6	11.3	2.8	9.9	9.7
	11.0 m																	13.5	11.3	2.8	9.9	9.7
	12.0 m																	13.4	11.2			9.7
	13.0 m																	13.3				9.7
	14.0 m																	13.2				
	15.0 m																	13.2 ^b				
	16.0 m																					
	17.0 m																					
	18.0 m																					
Dissolved Oxygen (mg/L)	0.1 m	10.8	11.5	10.8	10.6	4.1	13.2	10.3	10.3	0.4	10.8	10.7	2.3	9.9	10.4	12.4	11.3	10.2	11.3	17.9	16.0	11.2
	0.5 m	10.8	11.7		10.7		12.9	10.4	10.5	0.3	10.9	10.8		9.9	10.4	11.5	11.4					
	1.0 m	10.8	11.7	10.8	10.7	3.8	12.9	10.4	10.6	0.3	10.9	10.8	1.8	9.9	10.3	11.3	11.4	10.2	11.3	18.0	13.3	11.2
	1.5 m	10.8	11.7		10.8		12.7	10.4	10.8	0.2	10.9	10.9		9.9	10.2	10.7	11.4					
	2.0 m	10.8	11.7	11.2	10.8	3.5	12.8	11.0	10.8		11.1	10.9	1.5	9.9	10.2	10.5	11.4	10.2	11.6	17.4	12.9	11.2
	2.5 m	10.8			10.8		12.7	11.2								10.3	11.4					
	3.0 m			11.2	10.8	2.5	12.7	11.2								10.2	11.4	10.2	11.6	15.1	12.8	11.2
	3.5 m				10.8		12.7	11.2								10.1	11.3					
	4.0 m														10.1	11.3	10.2	11.6	13.8	12.6	11.2	
	5.0 m																10.2	11.7	12.8	12.8	11.1	
	6.0 m																10.3	11.7	12.0	12.6	11.1	
	7.0 m																10.2	11.8	9.2	12.4	11.1	
	8.0 m																10.3	11.6	8.9	12.5	11.1	
	9.0 m																10.3	11.5	7.8	12.3	11.1	
	10.0 m																	10.2	11.7	7.7	11.9	11.1
	11.0 m																	10.2	11.5	7.4	11.7	11.1
	12.0 m																	10.2	11.6			11.1
	13.0 m																	10.2				11.1
	14.0 m																	10.2				
	15.0 m																	10.1 ^b				
	16.0 m																					
	17.0 m																					
	18.0 m																					

shading = under-ice profiles n.d. = not determined

^b at 14.5 m

Appendix D13. Vertical profiles of water temperature and dissolved oxygen concentrations in lakes within the Meliadine Study Area, 1997 - 1999.

Parameter	ML-S				ML-SE			ML-W				LML			PL		HB	
	Date	20-Jul-97	16-Aug-97	27-Apr-98	25-Jul-98	26-Apr-98	22-Jul-98	19-Jul-99	20-Jul-97	16-Aug-97	24-Apr-98	27-Jul-98	24-Apr-98	29-Jul-98	02-Sep-98	24-Apr-98	28-Jul-98	29-Jul-98
Time	13:30	10:00	10:00	13:45	14:30	15:00	12:30	17:30	14:00	13:30	17:15	16:00	10:00	12:30	11:00	10:30	14:30	
UTM (NAD 27)	Easting	532280	532283	532259	532300	535972	535800	535800	524254	524294	524283	525720	537730	537810	537808	509584	509590	546560
Zone 15V	Northing	6989378	6989227	6989116	6989400	6986334	6986380	6986380	7000982	7000981	7001121	7000851	6977994	6977970	6977963	6993169	6993230	6969370
pH	7.14	6.97	6.79	7.05	6.75	n.d.	85.30	7.24	7.10	6.68	n.d.	6.83	6.35	6.71	6.50	n.d.	7.70	
Conductivity (µS/cm)	58.4	55.5	105	57.6	170	69.4	69.4	51.4	52.2	68.3	51.8	116	76.2	69.8	68.9	52.2	28.2	
Total Depth (m)	6.3	6.2	5.0	5.8	3.0	3.0	3.1	8.1	8.5	4.2	6.5	14.4	14.5	14.8	17.4	18.8	8.0	
Ice Thickness (m)			1.8		1.8					2.3		1.5			2.4			
Snow Cover (m)			0.3		0.3					0.3		0.6			0.0			
Secchi Transparency (m)	>6.3	>6.2	n.d.	5.2	n.d.	>3.0	3	7.9	>8.5	n.d.	>6.5	n.d.	6.6	7.5	n.d.	6.9	7.0	
Water Temperature (°C)	0.1 m	14.6	13.2	-0.2	13.1	-0.2	11.4	11.7	14.3	13.6	0.1	12.9	0.0	14.0	10.5	0.4	11.9	13.1
	0.5 m				13.0		11.2	11.4										
	1.0 m	14.4	12.8	-0.2	13.0	-0.2	11.2	11.4	14.2	13.3	0.2	12.8	0.0	14.0	10.4	0.6	11.8	11.2
	1.5 m				12.9		11.1	11.3										
	2.0 m	14.3	12.5	0.0	12.9	0.0	11.0	11.2	14.1	13.1	0.3	12.7	0.4	13.8	10.4	0.8	11.7	10.2
	2.5 m				12.9	1.2 ^d	11.0	11.2	14.0									
	3.0 m	14.3	11.9	0.9	12.9		11.0	11.2	14.0	12.9	1.0	12.6	1.0	13.7	10.3	1.0	11.6	9.5
	3.5 m				12.9													
	4.0 m	14.3	11.8	1.4	12.9				14.0	12.3	1.2	12.5	1.1	13.5	10.3	1.1	11.6	9.2
	5.0 m	14.3	11.6	1.6 ^c	12.6				14.0	12.0		12.5	1.2	13.4	10.3	1.4	11.5	8.7
	6.0 m	14.3	11.4						14.0	11.7		12.4	1.2	13.3	10.3	1.5	11.5	8.5
	7.0 m								14.0	11.6			1.3	13.2	10.3	1.7	11.5	8.3
	8.0 m								13.9	11.4			1.3	13.0	10.3	1.9	11.5	8.3
	9.0 m												1.3	12.8	10.2	2.0	11.4	
	10.0 m												1.4	12.7	10.2	2.1	11.4	
	11.0 m												1.5	12.7	10.2	2.2	11.4	
	12.0 m												1.6	12.5	10.2	2.3	11.4	
	13.0 m												1.8	12.4	10.2	2.4	11.2	
	14.0 m												2.0	12.2	10.2	2.5	10.4	
	15.0 m															2.6	10.1	
	16.0 m															2.7	9.9	
	17.0 m															2.7	9.8	
	18.0 m															9.5		
Dissolved Oxygen (mg/L)	0.1 m	10.2	11.6	19.6	13.5	16.2	13.7	11.2	9.9	11.3	19.2	11.8	15.3	9.7	10.8	18.4	12.2	11.8
	0.5 m				12.6		13.7	11.3										
	1.0 m	10.2	11.5	19.5	12.5	16.0	13.7	11.3	9.9	11.2	19.6	11.1	15.2	9.6	10.7	18.3	12.1	11.9
	1.5 m				12.0		13.7	11.2										
	2.0 m	10.2	11.6	19.6	12.0	15.9	13.4	11.2	9.9	11.3	19.4	11.0	14.6	9.6	10.7	17.3	12.0	12.7
	2.5 m				11.8	14.6 ^d	14.2	11.2										
	3.0 m	10.3	11.8	19.1	12.0		14.2	11.2	10.0	11.4	18.4	11.0	13.6	9.4	10.6	16.9	12.2	12.7
	3.5 m				11.8													
	4.0 m	10.3	11.7	18.7	12.0				10.0	11.4	16.4	11.2	13.4	9.3	10.6	16.1	12.3	12.7
	5.0 m	10.3	11.9	17.6 ^c	11.6				10.0	11.6		11.3	13.3	9.3	10.6	15.0	12.2	12.9
	6.0 m		11.8						10.0	11.8		11.3	13.2	9.2	10.7	14.0	12.0	12.9
	7.0 m								10.1	11.8			13.3	9.2	10.6	13.1	12.0	14.3
	8.0 m								10.1	11.9			13.1	9.2	10.6	12.2	11.9	14.3
	9.0 m												12.8	9.2	10.6	11.6	11.8	
	10.0 m												12.5	9.2	10.6	10.9	11.7	
	11.0 m												12.0	9.2	10.6	10.0	11.6	
	12.0 m												11.4	9.2	10.6	9.3	11.5	
	13.0 m												10.8	9.2	10.6	8.8	11.5	
	14.0 m												9.7	9.2	10.6	8.7	11.5	
	15.0 m															7.7	11.6	
	16.0 m															7.5	11.6	
	17.0 m															7.9	11.6	
	18.0 m															9.5		

shading = under-ice profiles n.d. = not determined ^c at 4.8 m ^d at 2.7 m



APPENDIX E

Lower Trophic Levels

Appendix E1. Periphyton chlorophyll a and ash-free-dry-mass (AFDM) concentrations in the Meliadine Study Area, 1997 and 1998.

Site	Date	Chlorophyll a ($\mu\text{g}/\text{cm}^2$)							AFDM (mg/cm^2)						
		Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE ^a	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE
Streams															
A0-1	21-Jul-97	0.87	0.80	0.97	0.00	0.60	0.65	0.17	10.61	29.43	6.73	8.61	5.35	12.15	4.41
A0-1	17-Jul-98	0.28	0.25	0.18	0.18	4.11	1.00	0.78	2.82	4.92	5.61	2.80	2.44	3.72	0.64
A5-6	23-Jul-97	3.85	1.34	1.40	0.26	2.29	1.83	0.60	20.28	24.17	31.75	25.27	9.57	22.21	3.66
A5-6	24-Jul-98	0.50	1.34	5.89	1.96	2.80	2.50	0.93	3.96	0.32	3.10	15.14	10.60	6.62	2.72
A7-8	22-Jul-97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.16	18.44	17.56	4.10	0.10	10.87	3.71
A7-8	23-Jul-98	10.27	4.14	10.55	3.84	2.05	6.17	1.77	2.68	3.64	2.68	3.28	18.97	6.25	3.19
B1-2	21-Jul-97	1.28	2.15	3.76	2.13	4.71	2.81	0.62	45.52	66.78	35.15	83.39	46.13	55.39	8.68
B1-2	21-Jul-98	0.32	0.14	0.24	0.08	0.46	0.25	0.07	3.74	0.17	0.96	0.21	0.69	1.15	0.66
B3-4	21-Jul-98	0.75	0.54	0.32	0.14	1.12	0.57	0.17	0.48	2.74	1.32	3.40	6.09	2.80	0.97
B4-5	24-Jul-97	11.59	10.30	7.09	10.64	6.72	9.27	0.99	36.95	36.26	25.47	31.71	13.79	28.84	4.28
B4-5	24-Jul-98	0.54	0.89	1.77	0.53	1.45	1.04	0.25	2.32	0.70	3.31	1.63	2.45	2.08	0.44
B5-6	19-Jul-98	0.80	0.26	0.67	0.15	0.10	0.40	0.14	0.73	0.88	1.32	0.70	0.27	0.78	0.17
B6-7	17-Jul-97	2.74	4.31	4.09	3.75	4.71	3.92	0.33	30.72	8.85	38.20	21.85	59.61	31.85	8.49
B6-7	19-Jul-98	0.22	0.37	0.90	0.59	0.49	0.51	0.11	1.16	7.22	1.29	3.78	2.77	3.24	1.11
D0-1	24-Jul-97	8.97	17.33	3.63	6.41	2.41	7.75	2.65	13.69	33.81	2.45	17.88	42.77	22.12	7.21
D6-7	17-Jul-97	0.99	1.01	1.41	3.04	3.14	1.92	0.48	10.82	5.86	16.74	8.68	14.19	11.26	1.93
ML-MR	23-Jul-97	9.85	1.38	5.69	8.09	5.13	6.03	1.44	20.65	107.63	236.91	176.52	67.52	121.85	38.49
ML-MR	25-Jul-98	1.09	2.14	1.37	0.90	2.10	1.52	0.26	70.39	50.38	35.65	29.62	55.15	48.24	7.24
ML-PL	22-Jul-97	2.71	0.92	2.00	4.74	1.43	2.36	0.67	282.79	105.91	144.59	108.50	219.81	172.32	34.43
ML-PL	27-Jul-98	1.77	1.88	2.78	0.69	1.74	1.77	0.33	116.74	126.49	41.88	25.94	39.24	70.06	21.28
MR-L	20-Jul-98	0.12	0.05	0.08	0.15	0.10	0.10	0.02	1.99	1.36	2.34	2.49	2.87	2.21	0.26
Lakes															
A6	23-Jul-97	0.48	0.42	0.31	0.08	0.24	0.31	0.07	1.49	1.87	4.35	10.88	1.79	4.08	1.78
A6	24-Jul-98	0.01	0.00	0.01	0.04	0.04	0.02	0.01	0.09	0.00	0.15	0.16	0.16	0.11	0.03
A8	22-Jul-97	8.60	5.24	2.76	12.80	5.16	6.91	1.74	58.89	47.33	30.03	29.27	40.40	41.18	5.56
A8	23-Jul-98	0.17	0.29	0.00	0.00	0.26	0.14	0.06	3.85	3.74	2.05	2.54	2.31	2.90	0.38
B2	21-Jul-97	1.87	2.22	1.91	7.65	4.03	3.54	1.10	33.63	30.70	18.42	72.98	38.95	38.94	9.15
B2	21-Jul-98	0.00	0.07	0.03	0.04	0.00	0.03	0.01	1.51	2.26	2.63	1.62	1.89	1.98	0.21
B5	18-Jul-97	3.03	0.88	2.48	4.19	2.24	2.56	0.54	17.38	19.11	43.00	37.21	30.01	29.34	4.98
B5	20-Jul-98	0.34	0.27	0.37	0.18	0.39	0.31	0.04	3.05	1.41	2.19	1.89	2.14	2.13	0.27
B7	18-Jul-97	2.16	3.65	1.47	0.58	0.98	1.77	0.54	41.82	40.93	65.82	42.02	53.22	48.76	4.83
B7	19-Jul-98	0.18	0.00	0.94	1.06	1.02	0.64	0.23	4.09	3.85	10.43	4.18	3.16	5.14	1.33
D7	17-Jul-97	3.94	1.59	4.27	2.94	7.78	4.10	1.03	27.22	42.84	53.48	18.69	124.03	53.25	18.70
G2	24-Jul-97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.48	59.03	17.18	25.95	21.22	28.37	7.81
ML-E	19-Jul-97	0.00	0.15	0.53	0.31	0.45	0.29	0.10	9.48	7.63	9.55	12.53	9.16	9.67	0.80
ML-E	18-Jul-98	0.21	0.09	0.12	0.21	0.16	0.16	0.02	1.74	1.96	2.35	1.74	3.14	2.19	0.26
ML-S	20-Jul-97	0.13	0.00	0.00	0.12	0.00	0.05	0.03	0.91	0.91	0.42	1.01	0.94	0.84	0.11
ML-S	25-Jul-98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.89	7.88	8.79	5.54	4.61	6.14	0.94
ML-SE	22-Jul-98	0.00	0.00	0.00	0.00	0.12	0.02	0.02	0.33	0.43	0.17	0.38	0.67	0.39	0.08
ML-W	20-Jul-97	1.10	3.15	0.80	0.72	1.34	1.42	0.45	15.94	20.88	2.01	16.98	2.97	11.76	3.87
ML-W	27-Jul-98	0.11	0.09	0.02	0.14	0.06	0.08	0.02	1.08	1.70	0.81	1.87	2.45	1.58	0.29
PL	28-Jul-98	0.31	0.40	0.55	0.25	0.33	0.37	0.05	2.82	1.94	0.59	0.65	0.90	1.38	0.43
LML	29-Jul-98	0.32	0.11	0.13	0.15	0.30	0.20	0.04	5.45	2.04	2.35	1.98	3.29	3.02	0.65

^a SE = standard error

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	A0-1										A5-6						
	July 1997					July 1998					July 1997						
	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE
BACILLARIOPHYTA (Diatoms)																	
<i>Achnanthes oetha</i>													1116	1046		721	361
<i>Achnanthes flexella</i>	P	P	P	152	136	57	35	P ¹	306	P	102	102	125	P	P	42	42
<i>Achnanthes lanceolata</i>																	
<i>Achnanthes minutissima</i>		19610	37488	34398	40034	26306	7469	31073	42209	25015	32766	5035	8018	9732	11156	9635	907
<i>Achnanthes minutissima v. cryptocephala</i>	14625		4608	697	697	4126	2748	P	8925	4385	4437	2577	349	744	4183	1759	1218
<i>Amphipleura</i> sp.																	
<i>Amphora</i> sp.			P														
<i>Amphora ovalis</i>	129		P	P	272	80	54	992	P	P	331	331			P		
<i>Amphora ovalis v. pediculus</i>																	
<i>Anomooneis</i> sp.																	
<i>Anomooneis vitrea</i>																	
<i>Asterionella formosa</i>				P	P			P	P	1058	353	353					
<i>Caloneis</i> sp.																	
<i>Caloneis ventricosa</i>																	
<i>Caloneis ventricosa v. truncatula</i>														P			
<i>Cocconeis diminuta</i>																	
<i>Cocconeis pediculus</i>																	
<i>Cocconeis placentula</i>																	
<i>Cocconeis placentula v. euglypta</i>																	
<i>Cocconeis</i> sp.								P									
<i>Coccinodiscus denarius</i>																	
<i>Coccinodiscus lacustris</i>																	
<i>Cyclotella</i> sp.	360	P	P			72	72										
<i>Cyclotella antiqua</i>				465	697	232	147	1487	306	1210	1001	357	P	P	P		
<i>Cyclotella comta</i>																	
<i>Cyclotella glomerata</i>																	
<i>Cyclotella kutzingiana</i>																	
<i>Cyclotella meneghiniana</i>																	
<i>Cyclotella ocellata</i>					P			P	P	P	433	293					
<i>Cyclotella striata</i>								992	306	P							
<i>Cymbella affinis</i>																	
<i>Cymbella amphioxys</i>															P		
<i>Cymbella aspera</i>					P												
<i>Cymbella cistula</i>																	
<i>Cymbella cuspidata</i>		P	P							P				P			
<i>Cymbella cymbiformis</i>	P			1376	P	275	275						44			15	15
<i>Cymbella cymbiformis v. nonpunctata</i>	120	261	261			128	58						349	155	530	345	108
<i>Cymbella gracilis</i>					232	46	46	P	P	P							
<i>Cymbella lanceolata</i>																	
<i>Cymbella mexicana v. janischii</i>																	
<i>Cymbella minuta</i>	120	915	1276	232	697	648	214	3028	6694	2760	4161	1269	349	310	1743	801	471
<i>Cymbella naviculiformis</i>				P	P												
<i>Cymbella sinuata</i>																	
<i>Cymbella tumida</i>																	
<i>Cymbella turgida</i>	P		P	232	230	93	57		P				349	279	397	342	34
<i>Cymbella turgidula</i>																	
<i>Cymbella</i> sp.	646		P		P	129	129						P	P	P		
<i>Denticula tenuis</i>	P	261	523	1162	232	436	200	P	P	302	101	101	697	744	1394	945	225
<i>Diatoma elongatum</i>	1651	2843	2216	3835	2440	2597	365	2851	3999	1979	2943	585	1743	3376	4647	3255	840
<i>Diatoma vulgare</i>																	
<i>Didymosphenia geminata</i>																	
<i>Diploneis</i> sp.				P	P			P	P								
<i>Diploneis elliptica</i>																	
<i>Diploneis finnica</i>																	
<i>Diploneis interrupta</i>																	
<i>Diploneis ovalis</i>										P							
<i>Epithemia sorex</i>	480	1160	1002	1143	2999	1357	429	P	306	P	102	102	P		P		
<i>Eunotia arcus</i>																	
<i>Eunotia exigua</i>																	
<i>Eunotia flexuosa</i>																	
<i>Eunotia glacialis</i>				P													
<i>Eunotia major</i>																	
<i>Eunotia papilio</i>																	
<i>Eunotia praerupta</i>	P	P	P	P	P			P	P	P			P	P	P		
<i>Eunotia praerupta v. bidens</i>				P						P							
<i>Eunotia sudetica</i>																	
<i>Eunotia</i> sp.	P																
<i>Fragilaria brevistriata</i>																	
<i>Fragilaria construens</i>					136	27	27										
<i>Fragilaria crotonensis</i>	P	915	685	1758	1902	1052	352	P	1116	1512	876	453	697	P	1743	813	507
<i>Fragilaria intermedia</i>																	
<i>Fragilaria pinnata</i>	3604	7060	4183	15107		5991	2541	1983	7809	2722	4171	1831	349			116	116
<i>Frustulia vulgaris</i>																	
<i>Gomphonema</i> sp.					P	P											
<i>Gomphonema acuminatum</i>																	
<i>Gomphonema acuminatum v. coronata</i>									P								
<i>Gomphonema angustatum</i>	P	1569	249	930	P	550	306	550	P	302	284	159	P	P			
<i>Gomphonema constrictum</i>	P																
<i>Gomphonema gracile</i>									P	P					P		
<i>Gomphonema intricatum v. vibrio</i>																	
<i>Gomphonema olivaceum</i>									P	P							
<i>Gomphonema parvulum</i>																	
<i>Gyrosigma</i> sp.																	
<i>Hantzschia amphioxys</i>				P													
<i>Melosira</i> sp.																	
<i>Melosira granulata</i>																	
<i>Meridion circulare</i>																	
<i>Navicula</i> sp.		P	P														
<i>Navicula amphibola</i>																	
<i>Navicula anglica</i>								P	P	P							
<i>Navicula aspera</i>					P												
<i>Navicula bacillum</i>																	
<i>Navicula decussis</i>																	
<i>Navicula dolosa</i>																	
<i>Navicula capitata</i>																	
<i>Navicula cryptocephala</i>	P	523	1307	5534	349	1543	1021	3657	2928	2481	3022	343	349	1673	3023	1682	772
<i>Navicula cryptocephala v. intermedia</i>	3964	3203	2614		1627	2282	686						872	744		539	272
<i>Navicula cuspidata</i>										P							

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	A0-1										A5-6						
	July 1997					July 1998					July 1997						
	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE
<i>Navicula exigua</i>													P	P	P		
<i>Navicula exigua</i> v. <i>capitata</i>																	
<i>Navicula lacustris</i>								P		P							
<i>Navicula laevisissima</i>																	
<i>Navicula lanceolata</i>								7685		2873	3519	2242					
<i>Navicula mutica</i>																	
<i>Navicula placenta</i>																	
<i>Navicula pseudoscutiformis</i>																	
<i>Navicula pupula</i>				P	P			P	P	P				P	P		
<i>Navicula radiosa</i>	240	P	3461		P	740	682	744	P		248	248	436	1329	614	793	273
<i>Navicula reinhardtii</i>																	
<i>Navicula rhynchocephala</i>																	
<i>Navicula tripunctata</i>																	
<i>Navicula tripunctata</i> v. <i>schizonemoides</i>																	
<i>Navicula viridula</i>				174	581	151	113	5516	12097	2117	6577	2929					
<i>Nedium</i> sp.				P	P												
<i>Nedium bisulcatum</i>																	
<i>Nedium dubium</i>									P	P							
<i>Nedium hitchcockii</i>		P	P														
<i>Nedium iridis</i> v. <i>amphigomphus</i>			P														
<i>Nitzschia</i> sp.																	
<i>Nitzschia acicularis</i>														2603		868	868
<i>Nitzschia amphibia</i>										P							
<i>Nitzschia angustata</i>								P									
<i>Nitzschia dissipata</i>										P							
<i>Nitzschia filiformis</i>	129	131	498	P	232	198	84	P	558	2571	1043	781	P		1046	349	349
<i>Nitzschia fonticola</i>	646		1569			443	308	P	P								
<i>Nitzschia palea</i>																	
<i>Nitzschia sigmoidea</i>	129	P	233	P	P	72	47										
<i>Pinnularia</i> sp.				P	P												
<i>Pinnularia biceps</i>	129	P	P			26	26						P	P			
<i>Pinnularia borealis</i>																	
<i>Pinnularia maior</i>																	
<i>Pinnularia mesolepta</i>								P	P	P							
<i>Pinnularia nodosa</i>				P	P												
<i>Pinnularia streptoraphe</i>																	
<i>Pinnularia viridis</i>								P		P							
<i>Rhizosolenia longiseta</i>																	
<i>Rhoicosphenia curvata</i>																	
<i>Rhopalodia gibba</i>	P	P	P	232	156	78	49	P	P	P				249		83	83
<i>Rhopa;pdoa gebberula</i>																	
<i>Stauroneis anceps</i>		P		P	P			P	P	P							
<i>Stauroneis phoenicenteron</i>	P		P	P	P												
<i>Stauroneis smithii</i>																	
<i>Stauroneis</i> sp.																	
<i>Stephanodiscus astraea</i>																	
<i>Surirella</i> sp.					P												
<i>Surirella angustata</i>																	
<i>Synedra actinastroides</i>	3749	2091	3370	9278	10313	5760	1678	24813	18317	13307	18812	3331	6422	6321	5637	6127	247
<i>Synedra acus</i>					P			P	139		46	46	697	372	1977	1015	490
<i>Synedra</i> sp.																	
<i>Synedra ulna</i>	742	P	62	523	113	288	146	1487	P	76	521	483	1759	1162	1002	1308	230
<i>Tabellaria fenestrata</i>	420	1297	1899	1627	8716	2792	1502	372	957	P	443	279	2440	558	4996	2665	1286
<i>Tabellaria flocculosa</i>	119	523	2117	697	186	728	363	3471	7194	1210	3958	1745	3661	8274	3950	5295	1492
CRYPTOPHYTA (Cryptomonads)																	
<i>Cryptomonas curvata</i>																	
<i>Cryptomonas erosa</i>																	
<i>Cryptomonas ovata</i>	120		125			49	30			302	101	101					
<i>Cryptomonas reflexa</i>																	
<i>Katablepharis ovalis</i>																	
<i>Rhodomonas minuta</i>																	
CHRYSOPHYTA (Golden-Brown Algae)																	
<i>Chrysiasterum catenatum</i>		P															
<i>Chrysococcus</i> sp.																	
<i>Chrysoikos</i> sp.																	
<i>Chrysoisphaerella rodheii</i>														349		116	116
<i>Dinobryon crenulatum</i>																	
<i>Dinobryon divergens</i>	120		P	P	P	24	24	992	1116	907	1005	61		349		116	116
<i>Dinobryon sertularia</i>	120	P	523	232	465	268	100	1859	P	907	922	537	744	697	349	597	125
<i>Dinobryon sertularia</i> v. <i>protuberans</i>	129	P	261	152		108	50	1487	1116	1512	1372	128		P			
<i>Dinobryon sociale</i>										P	1815	605					
<i>Dinobryon tabellariae</i>										P							
<i>Ishtmochloron trispinatum</i>													P	349		116	116
<i>Kephyrion</i> sp.																	
<i>Kephyrion boreale</i>													P				
<i>Ochromonas spa</i>									1116		372	372	744			248	248
<i>Ochromonas stellaris</i>																	
<i>Ophiocytium</i> sp.																	
<i>Pseudokephyrion</i> sp.																	
<i>Stichogloea doederleinii</i>				1627	2208	767	479		3347		1116	1116					
<i>Synura</i> sp.																	
<i>Unidentified statospore</i>	P	261				52	52	1983	1673	907	1521	320	155		697	284	211
PYRROPHYTA (Dinoflagellates)																	
<i>Glenodinium</i> sp.																	
<i>Gymnodinium</i> sp.																	
<i>Gymnodinium uberrimum</i>	P	P	31		P	6	6	P	P	P			349	155	132	212	69
<i>Peridinium</i> sp.			P										349		P	116	116
<i>Peridinium aciculiferum</i>	258	P	747	465	697	433	139	1983	1116		1033	574	349	372	P	240	120
<i>Peridinium cinctum</i>	120	P	309		P	86	60	P	P								
<i>Peridinium palatinum</i>																	
<i>Peridinium palustre</i>																	
<i>Peridinium willei</i>														P			
<i>Unidentified cyst</i>		261	125	1162		310	219		1531	302	611	468					
EUGLENOPHYTA																	
<i>Euglena</i> sp.																	
<i>Phacus</i> sp.																	
<i>Trachelomonas</i> sp.	P	P			272	54	54			P			155	P		52	52

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	A0-1										A5-6							
	July 1997					July 1998					July 1997							
	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE	
CHLOROPHYTA (Green Algae)																		
<i>Actinotaenium</i> sp.																		
<i>Ankistrodesmus convolutus</i>	1081	784	1307			634	272						3094	7158	8367	6206	1595	
<i>Ankistrodesmus falcatus</i>	360	P		697	232	258	130	992	2421	1058	1490	466						
<i>Ankistrodesmus falcatus</i> v. <i>spiralis</i>	1787	1438	1046	1162	1155	1318	134	1487	2789	1210	1829	487	3138	1859	3138	2712	426	
<i>Ankistrodesmus gelifacius</i>									P	302	101	101						
<i>Arthrodesmus triangularis</i>																		
<i>Binuclearia</i> sp.				3951	P	790	790											
<i>Botryococcus</i> sp.				P														
<i>Bulbochaete</i> sp.	3363	523	3050	2789	3667	2678	559	1934	995		976	558	1220	2603	P	1274	752	
<i>Chlamydomonas</i> sp. a													349			116	116	
<i>Chlamydomonas</i> sp. b																		
<i>Closterium</i> sp.					58	12	12	P	P									
<i>Closterium acerosum</i>		P																
<i>Closterium actum</i>			P															
<i>Closterium dianae</i>																		
<i>Closterium pseudolunula</i>																		
<i>Closterium rostratum</i>					P													
<i>Coeloastrum</i> sp.																		
<i>Coeloastrum cambricum</i>																		
<i>Coeloastrum microporum</i>	4805	P	996	P	697	1300	898	1487		1815	1101	558		P	P			
<i>Coeloastrum printzii</i>	P	1177	125	465		353	223	992			331	331	747	372	P		216	
<i>Coeloastrum sphaericum</i>	P	4183	1494	5810	930	2483	1084	P	P				1992	2169	6487	3549	1470	
<i>Cosmarium</i> sp.	P			1162	156	264	227	1487				496	496					
<i>Cosmarium anceps</i>		P						P										
<i>Cosmarium biculatum</i>		523				105	105											
<i>Cosmarium botrytis</i>																		
<i>Cosmarium capitulum</i> v. <i>groenlandicum</i>								P	P									
<i>Cosmarium contracta</i>																		
<i>Cosmarium coronatum</i>																		
<i>Cosmarium depressum</i>						26	26											
<i>Cosmarium granulatum</i>	129	P		93	232	136	92	521	P		174	174	125	155	265	182	43	
<i>Cosmarium holmiense</i> v. <i>intermedium</i>								P						P				
<i>Cosmarium humile</i> v. <i>lacustre</i>	P		P	232	P	46	46	P	P				349	P	132	160	102	
<i>Cosmarium impressulum</i> v. <i>suborthogonum</i>		P	P		P				306		102	102	P		349	116	116	
<i>Cosmarium laeve</i>				P														
<i>Cosmarium norimbergense</i>	P			697		139	139			302	101	101						
<i>Cosmarium phaseolus</i> v. <i>phaseolus</i>									77		26	26						
<i>Cosmarium pokornyianum</i>																		
<i>Cosmarium pseudoprotuberans</i>										P								
<i>Cosmarium rectangulare</i>										P								
<i>Cosmarium rectangulum</i>					P			P		P								
<i>Cosmarium reniforme</i>																		
<i>Cosmarium repandum</i>																		
<i>Cosmarium septentrionale</i>				227	232	92	56	297	918	302	506	206						
<i>Cosmarium speciosum</i>			125	P	P	25	25	P					P	P	697	232	232	
<i>Cosmarium subgranatum</i>																		
<i>Cosmarium tetraophthalmum</i>								P					498	P		166	166	
<i>Cosmarium turpinii</i>	30	88	P	P	P	24	17	P	P					372	P	124	124	
<i>Cosmarium turpinii</i> v. <i>podolicum</i>																		
<i>Crucigenia apiculata</i>																		
<i>Crucigenia quadrata</i>		1046				209	209		P									
<i>Crucigenia rectangularis</i>	P	P			2789	558	558		P				P					
<i>Cylindrocapsa brebissonii</i>	129	P		1162		258	227	297	P		99	99	349	155	2092	865	616	
<i>Desmidiium swartzii</i> v. <i>quadrangulatum</i>																		
<i>Dictyosphaerium pulchellum</i>																		
<i>Elakatothrix</i> sp.			261			52	52	1364	P	307	557	413		P	349	116	116	
<i>Euastropsis richteri</i>			P		P													
<i>Euastrum</i> sp.																		
<i>Euastrum bidentatum</i>														125			42	
<i>Euastrum denticulatum</i>																		
<i>Euastrum dubium</i> v. <i>maius</i>	P			P	P			P					125	372	132	210	81	
<i>Euastrum elegans</i>	P	P	P	P	136	27	27	P					436	651	265	451	112	
<i>Euastrum gemmatum</i>																		
<i>Euastrum insulare</i> v. <i>silesiacum</i>																		
<i>Euastrum obesum</i>																		
<i>Euastrum ohioense</i>																		
<i>Euastrum sinosum</i>																		
<i>Euastrum verrucosum</i>																		
<i>Gemmelicystis neglecta</i>		P																
<i>Geminella interrupta</i>																		
<i>Gloeocystis schroeteri</i>	3423	6275	6537		418	3331	1388	P		6200	2067	2067	17780	1305	19523	12869	5804	
<i>Gloeotila pelagica</i>					P													
<i>Golenkinia radiata</i> v. <i>brevispina</i>	240					48	48							372	349	240	120	
<i>Gonatozygon brebissonii</i>									P									
<i>Gonatozygon monotaenium</i>				P	P								349	136	P	162	102	
<i>Hyalotheca</i> sp.																		
<i>Kirchneriella</i> sp.		261		232	P	99	61	496	P		165	165	1743		349	697	532	
<i>Koliella longiseta</i>																		
<i>Lagerheimia subsalsa</i>																		
<i>Lagerheimia wratislawiensis</i>																		
<i>Micractinium pusillum</i>																		
<i>Monoraphidium</i> sp.																		
<i>Mougeotia</i> sp. a	P	P	778	349	232	272	143	496		302	266	144	8193	12986	7583	9587	1708	
<i>Nephrocium limneticum</i>													P					
<i>Oeodogonium</i> sp.																		
<i>Oocystis elliptica</i>	3357	1307	498			1032	628		1116	11190	4102	3559	1494	P	530	675	437	
<i>Oocystis lacustris</i>	2042	11243	12550	9761	12782	9676	1983	15123	12272	2117	9837	3947	6624	11528	17954	12035	3281	
<i>Oocystis solitaria</i>								P										
<i>Onephris obesa</i>	P			P	1859	372	372						P	1549	P	516	516	
<i>Quadrigula closterioides</i>																		
<i>Phacotus</i> sp.		261	261			104	64								349	116	116	
<i>Pandorina morum</i>																		
<i>Pediastrum boryanum</i>	P	P	P	2789	465	651	542						P	P	P			
<i>Pediastrum boryanum</i> v. <i>ellesmerense</i>	P	523	249	P		154	104	P							P			
<i>Pediastrum duplex</i>																		
<i>Pediastrum duplex</i> v. <i>clathratum</i>		P																
<i>Pediastrum integrum</i> v. <i>scutatum</i>																		
<i>Pediastrum tetras</i>	904	1177	1494	1819	1551	1389	158	3967	P	1210	1726	1174						

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Species	A0-1										A5-6							
	July 1997					July 1998					July 1997							
	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE	
<i>Penium</i> sp.																		
<i>Penium margaritaceum</i>																		
<i>Pleurotaenium</i> sp.																		
<i>Pleurotaenium trabecula</i>																		
<i>Protoderma</i> sp.																		
<i>Scenedesmus bijuga</i>	1201	2615	P		4184	1600	806		P				1743	1487	3486	2239	628	
<i>Scenedesmus acuminatus</i>	P	261		930	P	238	180	P		1210	403	403		620		207	207	
<i>Scenedesmus arcuatus</i>								P	P					2603	P	868	868	
<i>Scenedesmus denticulatus</i>				P				P	11156		3719	3719		P	P			
<i>Scenedesmus ecornis</i>																		
<i>Scenedesmus incrassatulus</i>	2883	3138	3922	6043	2557	3708	626	1934	12829	6048	6937	3176	6275	2231	15339	7948	3875	
<i>Scenedesmus obliquus</i>								P										
<i>Scenedesmus quadricauda</i>	3003	4706	784	930	930	2070	777	10908	5578	907	5798	2889	697	1487	P	728	430	
<i>Scenedesmus spinosus</i>									3347			1116	1116					
<i>Scenedesmus wisconsinensis</i>																		
<i>Spirogyra</i> sp.																		
<i>Staurastrum</i> sp. a	P		249	152	P	80	51	P	P				996	465		487	288	
<i>Staurastrum</i> sp. b																		
<i>Staurastrum</i> sp. c																		
<i>Staurastrum anatinum</i> v. <i>biradiatum</i>																		
<i>Staurastrum antilopaeum</i>															P			
<i>Staurastrum anatinum</i>																P	349	116
<i>Staurastrum apiculatum</i>																P	794	306
<i>Staurastrum borgeanum</i>					P					306	102	102	125			132	44	44
<i>Staurastrum brebissonii</i>																		
<i>Staurastrum clevei</i>																		
<i>Staurastrum curvatum</i>																		
<i>Staurastrum cuspidatum</i>																		
<i>Staurastrum dejectum</i>	P	P	P	232	P	46	46			306	102	102	249	P			83	83
<i>Staurastrum furcigerum</i>																		
<i>Staurastrum gladiosum</i>																		
<i>Staurastrum hystrix</i>																		
<i>Staurastrum longibranchiatum</i>																		
<i>Staurastrum lunatum</i>																		
<i>Staurastrum manfeldtii</i>																		
<i>Staurastrum pachyrhynchum</i>			P											P		P		
<i>Staurastrum pilosum</i>																		
<i>Staurastrum proboscidium</i>																		
<i>Staurastrum rhabdophorum</i>					P													
<i>Staurastrum subcruciatum</i>																		
<i>Staurastrum tetracerum</i>	129			465	P	119	90	P	P	454	151	151	P	P				
<i>Staurastrum varians</i>	129					26	26						P	P				
<i>Staurastrum triangularis</i>																		
<i>Stigeoclonium</i> sp.																		
<i>Teilingia granulata</i>		654	249	697	407	402	130	1487	6694	1210	3130	1784	3486	4091	2092	3223	592	
<i>Tetraedron tumidulum</i>	P									P								
<i>Tetraedron limneticum</i>																		
<i>Tetraedron minimum</i>	120	3661	522	234	1395	1186	658	992	2789	907	1563	614	1743	372	1046	1054	396	
<i>Tetraedron muticum</i>		523		P	697	244	152	496	3905	907	1769	1074	3495	5206	2789	3830	718	
<i>Tetraedron arthrodismiforme</i>																		
<i>Tetraedron caudatum</i>																		
<i>Tetraedron trigonum</i>				152		30	30											
<i>Trochiscia granulata</i>																		
<i>Xanthidium antilopaeum</i>																		
<i>Xanthidium subhastiferum</i> v. <i>murrayi</i>																		
<i>Zygnema</i> sp.	P		560			112	112	P					1394	3841	261	1832	1056	
CYANOPHYTA (Cyanobacteria)																		
<i>Agmenellum quadruplicatum</i>		13596	2988	8367	3719	5734	2379	13387			4462	4462	P	P				
<i>Agmenellum thermale</i>	841	4968	4445	12550		4561	2221		4462	P	1487	1487	P	P	P			
<i>Anabaena</i> sp.		P		P				9817	P	P	3272	3272	2789	P		930	930	
<i>Anabaena lapponica</i>																		
<i>Anabaena planctonica</i>																		
<i>Anacystis dimidiata</i>	P	P	498	P	P	100	100	2975	2449	2722	2715	152		P	1046	349	349	
<i>Anacystis marina</i>																		
<i>Anacystis montana</i>	43003		77656	P	6973	25526	15281											
<i>Anacystis thermalis</i>	14535		2091			3325	2832						7147	5578	2789	5171	1274	
<i>Aphanocapsa elachista</i>	27868	9674	8628	60893	54153	32243	10925	43632	227582	43246	104820	61381	22312	16734		13015	6704	
<i>Aphanocapsa elachista</i> v. <i>planctonica</i>	8168					1634	1634	243994		111896	118630	70515	14294	35327	115395	55005	30799	
<i>Aphanothece clathrata</i>				P				3347	12272		5206	3663		6894		2231	2231	
<i>Chlorogloea microcystoides</i>													69376	44996	17431	43934	15005	
<i>Chroococcus turgidus</i>	1291	1569	1569	697		1025	302						5404	7809	8018	7077	839	
<i>Coccolithus aeruginosa</i>																		
<i>Coelosphaerium kuetzingianum</i>																		
<i>Dactylococcopsis linearis</i>	480	523				201	123	5454	9483	3478	6138	1767	P	1487	1046	844	441	
<i>Desmonema wrangelii</i>				P									111560	24543	11121	49075	31482	
<i>Dichothrix gypsophila</i>	26186	4968	90991	85762	59266	53435	16705	175025	42243	94658	103975	38613	14294		P	4765	4765	
<i>Gloethece linearis</i> v. <i>composite</i>																		
<i>Gomphosphaeria lacustris</i>			74257	25101	32306	26333	13640	154696	295634	61694	170675	68004	13596	19709	21266	18190	2341	
<i>Lyngbya birgei</i>																		
<i>Lyngbya contorta</i>																		
<i>Microcoleus vaginatus</i>																		
<i>Microcystis flos-aquae</i>	7928	31115	P	36025		15014	7752							P	58569	19523	19523	
<i>Nostoc commune</i>	P			P	697	6275	1395	2380	7251	P	3210	2134	2789	P	1394	1394	805	
<i>Oncobrysa cesatii</i>																		
<i>Oscillatoria</i> sp.																		
<i>Oscillatoria limosa</i>																		
<i>Pseudanabaena</i> sp.								P	P	1210	403	403						
<i>Schizogonium murale</i>																		
<i>Schizothrix calcicola</i>	53694	927469	209175	124808	159903	295010	160129	1140886	594614	412772	716091	218788	557800	240969	292845	363871	98114	
<i>Scopulonema minus</i>								67680	116580	61358	81873	17449						
<i>Stigonema mamillosum</i>																		
Unidentified Cyanophyte akinete					7437	1487	1487											
Total Algal Density (No. cells/cm²)	245978	1157390	506624	481773	444318	567217	154528	2009035	1505555	903524	1472705	247527	922844	512003	738435	724427	118806	

* P = present, but not encountered during routine cell counts; SE = standard error.

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	A5-6						A7-8										
	July 1998						July 1997					July 1998					
	Rep 1	Rep 2	Rep 3	Rep 5	Mean	SE	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE
BACILLARIOPHYTA (Diatoms)																	
<i>Achnanthes detha</i>							1322	1992	765		1020	422					
<i>Achnanthes flexella</i>		739	P	P	185	185	P	P	P	P			P	P	P		
<i>Achnanthes lanceolata</i>														1364			455
<i>Achnanthes minutissima</i>	6574	21591	93257	45616	41759	18955	12192	26645	6431	5504	12693	4880	23977	19600	9978	17852	4135
<i>Achnanthes minutissima v. cryptocephala</i>	1143	6136	6973	4276	4632	1292	2645	5790			2109	1376	18291	5284	P	7858	5435
<i>Amphipleura</i> sp.																	
<i>Amphora</i> sp.																	
<i>Amphora ovalis</i>				P				P									
<i>Amphora ovalis v. pediculus</i>																	
<i>Anomooneis</i> sp.										P							
<i>Anomooneis vitrea</i>																	
<i>Asterionella formosa</i>			4408		1102	1102											
<i>Caloneis</i> sp.										P							
<i>Caloneis ventricosa</i>														P			
<i>Caloneis ventricosa v. truncatula</i>																	
<i>Cocconeis diminuta</i>																	
<i>Cocconeis pediculus</i>																	
<i>Cocconeis placentula</i>																	
<i>Cocconeis placentula v. euglypta</i>																	
<i>Cocconeis</i> sp.													P				
<i>Coscinodiscus denarius</i>																	
<i>Coscinodiscus lacustris</i>																	
<i>Cyclotella</i> sp.										149	37	37					
<i>Cyclotella antiqua</i>	P	P	1307	P	327	327	120	125	383	149	194	63	P				
<i>Cyclotella comta</i>							P										
<i>Cyclotella glomerata</i>		P	P	P									P	P			
<i>Cyclotella kutzingiana</i>																	
<i>Cyclotella meneghiniana</i>																	
<i>Cyclotella ocellata</i>	P									P							
<i>Cyclotella striata</i>																	
<i>Cymbella affinis</i>		P	P														
<i>Cymbella amphioxys</i>							70	125	P		49	30	2045	682	2138	1622	471
<i>Cymbella aspera</i>																	
<i>Cymbella cistula</i>				P													
<i>Cymbella cuspidata</i>																	
<i>Cymbella cymbiformis</i>	63	370		2138	643	505				448	112	112					
<i>Cymbella cymbiformis v. nonpunctata</i>							301	125	64		123	65					
<i>Cymbella gracilis</i>		P	P	P			120	P	P	P	30	30	P	P			
<i>Cymbella lanceolata</i>																	
<i>Cymbella mexicanum v. janischii</i>																	
<i>Cymbella minuta</i>	191	3219	13945	P	4339	3286	721	1660	765	523	917	253	2727	4091	713	2510	981
<i>Cymbella naviculiformis</i>																	
<i>Cymbella sinuata</i>																	
<i>Cymbella tumida</i>																	
<i>Cymbella turgida</i>								P	213		53	53					
<i>Cymbella turgidula</i>																	
<i>Cymbella</i> sp.				P	P		120	P		75	49	30	P				
<i>Denticula tenuis</i>	P	739	P	1425	541	342	421	623	128	75	312	129	2045	682	1425	1384	394
<i>Diatoma elongatum</i>	24573	161576	187364	128828	125585	35737	1262	3279	1929	523	1748	585	111951	130106	116177	119411	5485
<i>Diatoma vulgare</i>																	
<i>Didymosphenia geminata</i>																	
<i>Diploneis</i> sp.																	
<i>Diploneis elliptica</i>																	
<i>Diploneis finnica</i>																	
<i>Diploneis interrupta</i>																	
<i>Diploneis ovalis</i>																	
<i>Epithemia sorex</i>	P	P		P			240	P	P	P	60	60	P	P			
<i>Eunotia arcus</i>																	
<i>Eunotia exigua</i>																	
<i>Eunotia flexuosa</i>																	
<i>Eunotia glacialis</i>				P	P						P						
<i>Eunotia major</i>																	
<i>Eunotia papilio</i>																	
<i>Eunotia praeurupta</i>	P	P	P	1425	356	356	P	P	P	112	28	28	P	P			
<i>Eunotia praeurupta v. bidens</i>		P					P				P		P		P		
<i>Eunotia sudetica</i>																	
<i>Eunotia</i> sp.																	
<i>Fragilaria brevistriata</i>																	
<i>Fragilaria construens</i>				P	2851	713											
<i>Fragilaria crotonensis</i>	381	P	P	4989	1343	1219	P	P	383		96	96	9204	2587	3911	5234	2021
<i>Fragilaria intermedia</i>																	
<i>Fragilaria pinnata</i>		P	P	P			P	P					682	P		227	227
<i>Frustulia vulgaris</i>													P				
<i>Gomphonema</i> sp.																	
<i>Gomphonema acuminatum</i>				417	104	104				P							
<i>Gomphonema acuminatum v. coronata</i>								P	P								
<i>Gomphonema angustatum</i>	P		1743	42765	11127	10554	P	125			31	31		11852		3951	3951
<i>Gomphonema constrictum</i>										P							
<i>Gomphonema gracile</i>	191	P	18878	P	4767	4704							P	P	3920	1307	1307
<i>Gomphonema intricatum v. vibrio</i>													P				
<i>Gomphonema olivaceum</i>			1743		436	436							P				
<i>Gomphonema parvulum</i>													P				
<i>Gyrosigma</i> sp.																	
<i>Hantzschia amphioxys</i>																	
<i>Melosira</i> sp.																	
<i>Melosira granulata</i>																	
<i>Meridion circulare</i>																	
<i>Navicula</i> sp.				P										P			
<i>Navicula amphibola</i>																	
<i>Navicula anglica</i>																	
<i>Navicula aspera</i>																	
<i>Navicula bacillum</i>																	
<i>Navicula decussis</i>																	
<i>Navicula dolosa</i>																	
<i>Navicula capitata</i>																	
<i>Navicula cryptocephala</i>	191	1733	3468	6237	2907	1296	361	903	255	523	510	142	2557	1172	4512	2747	969
<i>Navicula cryptocephala v. intermedia</i>							2565	125	2296		1247	686					
<i>Navicula cuspidata</i>																	

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	A5-6						A7-8											
	July 1998						July 1997					July 1998						
	Rep 1	Rep 2	Rep 3	Rep 5	Mean	SE	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	
<i>Navicula exigua</i>							P	P										
<i>Navicula exigua</i> v. <i>capitata</i>																		
<i>Navicula lacustris</i>				P									P					
<i>Navicula laevisissima</i>																		
<i>Navicula lanceolata</i>		682	15688		4093	3869				598	149	149	2045	P		682	682	
<i>Navicula mutica</i>			P											P				
<i>Navicula placenta</i>																		
<i>Navicula pseudoscutiformis</i>																		
<i>Navicula pupula</i>			P				P	P					P					
<i>Navicula radiosa</i>				15381	3845	3845	160	2407	383	P	738	562						
<i>Navicula reinhardtii</i>																		
<i>Navicula rhynchocephala</i>																		
<i>Navicula tripunctata</i>																		
<i>Navicula tripunctata</i> v. <i>schizonemoides</i>																		
<i>Navicula viridula</i>			5229		1307	1307				P			P					
<i>Nedium</i> sp.																		
<i>Nedium bisulcatum</i>																		
<i>Nedium dubium</i>																		
<i>Nedium hitchcockii</i>																		
<i>Nedium iridis</i> v. <i>amphigomphus</i>																		
<i>Nitzschia</i> sp.	P	P																
<i>Nitzschia acicularis</i>	P																	
<i>Nitzschia amphibia</i>																		
<i>Nitzschia angustata</i>				P														
<i>Nitzschia dissipata</i>																		
<i>Nitzschia filiformis</i>	167	1479	2615	1425	1422	500	60	P			15	15	682	1364	P	682	394	
<i>Nitzschia fonticola</i>			P											P				
<i>Nitzschia palea</i>																		
<i>Nitzschia sigmoidea</i>							P		P									
<i>Pinnularia</i> sp.							P											
<i>Pinnularia biceps</i>																		
<i>Pinnularia borealis</i>																		
<i>Pinnularia maior</i>																		
<i>Pinnularia mesolepta</i>				P										P				
<i>Pinnularia nodosa</i>																		
<i>Pinnularia streptoraphe</i>																		
<i>Pinnularia viridis</i>																		
<i>Rhizosolenia longiseta</i>																		
<i>Rhoicosphenia curvata</i>																		
<i>Rhopalodia gibba</i>							P	31			8	8	P					
<i>Rhopalodia gibberula</i>			P															
<i>Stauroneis anceps</i>				P										P				
<i>Stauroneis phoenicenteron</i>																		
<i>Stauroneis smithii</i>																		
<i>Stauroneis</i> sp.										P								
<i>Stephanodiscus astraea</i>				P														
<i>Surirella</i> sp.	P																	
<i>Surirella angustata</i>																		
<i>Synedra actinastroides</i>	7282	40169	15688	P	15785	8737	4207	2106	1817	1345	2369	633	36508	24148	33976	31544	3770	
<i>Synedra acus</i>	128	2045	1613	P	947	518	180	P	478		165	113	12272	18810	10456	13846	2537	
<i>Synedra</i> sp.																		
<i>Synedra ulna</i>	P	462	P	4487	1237	1089	150	519	191	P	215	109	12070	9807	14611	12163	1388	
<i>Tabellaria fenestrata</i>	4811	24693	30784	111658	42987	23553	481	342	P	112	234	109	3238	1364	2616	2406	551	
<i>Tabellaria flocculosa</i>	2390	41561	142797	64211	62740	29583	992	3185	744	492	1353	619	9885	6593	8018	8165	953	
CRYPTOPHYTA (Cryptomonads)																		
<i>Cryptomonas curvata</i>																		
<i>Cryptomonas erosa</i>																		
<i>Cryptomonas ovata</i>														682		227	227	
<i>Cryptomonas reflexa</i>																		
<i>Katablepharis ovalis</i>																		
<i>Rhodomonas minuta</i>																		
CHRYSOPHYTA (Golden-Brown Algae)																		
<i>Chrysidiastrum catenatum</i>																		
<i>Chrysococcus</i> sp.																		
<i>Chrysoikos</i> sp.																		
<i>Chrysophaerella rodheii</i>																		
<i>Dinobryon crenulatum</i>																		
<i>Dinobryon divergens</i>	3001	9241	54908	20256	21852	11582	P			P			18067	48521	1782	22790	13697	
<i>Dinobryon sertularia</i>	381	3327	P	5702	2352	1341	P	125	638	P	191	152	12272	10281	2851	8468	2867	
<i>Dinobryon sertularia</i> v. <i>protuberans</i>	381			P	95	95	P	P	P	75	19	19		682	P	227	227	
<i>Dinobryon sociale</i>	890	3696	10458	1069	4028	2237			P				53688	65654	7662	42335	17677	
<i>Dinobryon tabellariae</i>																		
<i>Ishnmochloron trispinatum</i>								125			31	31						
<i>Kephyrion</i> sp.																		
<i>Kephyrion boreale</i>	P												2045			682	682	
<i>Ochromonas</i> sp.		682			171	171							682			227	227	
<i>Ochromonas stellaris</i>																		
<i>Ophiocytium</i> sp.							15				4	4						
<i>Pseudokephyrion</i> sp.																		
<i>Stichogloea doederleinii</i>		4091		P	1023	1023				75	19	19						
<i>Synura</i> sp.																		
<i>Unidentified statospore</i>	381	P	3486	4989	2214	1210	361	P			90	90	4772	2045	713	2510	1195	
PYRROPHYTA (Dinoflagellates)																		
<i>Glenodinium</i> sp.																		
<i>Gymnodinium</i> sp.																		
<i>Gymnodinium uberrimum</i>							15	P		P	4	4					P	
<i>Peridinium</i> sp.		P	P	P			P	P					P				P	
<i>Peridinium aciculiferum</i>	P	370	P	1425	449	337	120	P	510	P	158	121	P	P	P	P	P	
<i>Peridinium cinctum</i>	P	P	P										P	P	P	P	P	
<i>Peridinium palatinum</i>									P									
<i>Peridinium palustre</i>																		
<i>Peridinium willei</i>																		
<i>Unidentified cyst</i>	1334	739			518	323	P			75	19	19						
EUGLENOPHYTA																		
<i>Euglena</i> sp.																		
<i>Phacus</i> sp.																		
<i>Trachelomonas</i> sp.	P	P						2			1	1						

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Species	A5-6						A7-8												
	July 1998						July 1997					July 1998							
	Rep 1	Rep 2	Rep 3	Rep 5	Mean	SE	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE		
CHLOROPHYTA (Green Algae)																			
<i>Actinotaenium</i> sp.																			
<i>Ankistrodesmus convolutus</i>								P	191		48	48							
<i>Ankistrodesmus falcatus</i>		6136		8553	3672	2177		125	128		63	37	2727	682	713	1374	677		
<i>Ankistrodesmus falcatus</i> v. <i>spiralis</i>	286	P	P		72	72	P	125	128		63	37	5454	2727	2347	3509	979		
<i>Ankistrodesmus gelifactus</i>										P				P					
<i>Arthrodesmus triangularis</i>			P												P				
<i>Binuclearia</i> sp.													4772	1364		2045	1419		
<i>Botryococcus</i> sp.		P	P																
<i>Bulbochaete</i> sp.	P		P	4989	1247	1247	P	P	P	261	65	65	P						
<i>Chlamydomonas</i> sp. a																			
<i>Chlamydomonas</i> sp. b																			
<i>Closterium</i> sp.			P	P									P		P				
<i>Closterium acerosum</i>																			
<i>Closterium actum</i>																			
<i>Closterium diana</i>																			
<i>Closterium pseudolunula</i>																			
<i>Closterium rostratum</i>																			
<i>Coeloastrum</i> sp.		P																	
<i>Coeloastrum cambricum</i>																			
<i>Coeloastrum microporum</i>	P		P	P			P						P						
<i>Coeloastrum printzii</i>				P															
<i>Coeloastrum sphaericum</i>	P	10908	P		2727	2727		872		P	218	218	P						
<i>Cosmarium</i> sp.										112	28	28							
<i>Cosmarium anceps</i>							P	P											
<i>Cosmarium biculatum</i>								93			23	23						P	
<i>Cosmarium botrytis</i>		P		P			120	374	85		145	80							
<i>Cosmarium capitulum</i> v. <i>groenlandicum</i>		370			93	93													
<i>Cosmarium contracta</i>																			
<i>Cosmarium coronatum</i>																			
<i>Cosmarium depressum</i>							P	P	255		64	64							
<i>Cosmarium granulatum</i>		P	922	P	231	231	P	P	P	P			P	P					
<i>Cosmarium holmiense</i> v. <i>intermedium</i>		P											P						
<i>Cosmarium humile</i> v. <i>lacustre</i>		P		P				P		P								P	
<i>Cosmarium impressulum</i> v. <i>suborthogonum</i>		369	2765	P	784	666	P		P				1364					455	455
<i>Cosmarium laeve</i>	P												P						
<i>Cosmarium norimbergense</i>							P						P						
<i>Cosmarium phaseolus</i> v. <i>phaseolus</i>		739	P		185	185							P	P					
<i>Cosmarium pokornyianum</i>													P	1109				370	370
<i>Cosmarium pseudoprotuberans</i>																			
<i>Cosmarium rectangulare</i>		P	P	P				P											
<i>Cosmarium rectangulum</i>				713	178	178													
<i>Cosmarium reniforme</i>																			
<i>Cosmarium repandum</i>																			
<i>Cosmarium septentrionale</i>	P	2587	2535	2138	1815	613				149	37	37	682	682				455	227
<i>Cosmarium speciosum</i>			765	779	386	223	P	P	P										
<i>Cosmarium subgranatum</i>																			
<i>Cosmarium tetraopthalmum</i>		P	922	713	409	240	P	P		P			P						
<i>Cosmarium turpinii</i>			922	P	231	231	P	P					P						
<i>Cosmarium turpinii</i> v. <i>podolicum</i>																			
<i>Crucigenia apiculata</i>																			
<i>Crucigenia quadrata</i>																			
<i>Crucigenia rectangularis</i>							P						P						
<i>Cylindrocapsa brevissonii</i>	P	P	P	417	104	104	180	125	P	149	114	40	682	P	713	465	233		
<i>Desmidiium swartzii</i> v. <i>quadrangulatum</i>																			
<i>Dictyosphaerium pulchellum</i>																			
<i>Elakatothrix</i> sp.	572	P	1743	P	579	411		125	765		223	183	2045	682				909	601
<i>Euastrum richteri</i>	P																		
<i>Euastrum</i> sp.																			
<i>Euastrum bidentatum</i>				P	P														
<i>Euastrum denticulatum</i>																			
<i>Euastrum dubium</i> v. <i>maius</i>			691	P	173	173	P	P	P	P			663	370	P			344	192
<i>Euastrum elegans</i>	P	1109	922	P	508	296	120	P	P	P	30	30	P	P	P				
<i>Euastrum gemmatum</i>																			
<i>Euastrum insulare</i> v. <i>silesiacum</i>																			
<i>Euastrum obesum</i>																			
<i>Euastrum ohioense</i>																			
<i>Euastrum sinosum</i>																			
<i>Euastrum verrucosum</i>				P															
<i>Gemmellicystis neglecta</i>																			
<i>Geminella interrupta</i>																			
<i>Gloeocystis schroeteri</i>	P	1364	P		341	341	4147	5354	3444	P	498	498	1364	3696	2851	2637	682		
<i>Gloeotila pelagica</i>																			
<i>Golenkinia radiata</i> v. <i>brevispina</i>	381	682			266	165													
<i>Gonatozygon brevissonii</i>		P																	
<i>Gonatozygon monotaenium</i>				P				P	P					P	P				
<i>Hyalotheca</i> sp.		P																	
<i>Kirchneriella</i> sp.		P		713	178	178	361	125			122	85							
<i>Koliella longiseta</i>																			
<i>Lagerheimia subsalsa</i>																			
<i>Lagerheimia wratislawiensis</i>																			
<i>Micractinium pusillum</i>																			
<i>Monoraphidium</i> sp.																			
<i>Mougeotia</i> sp. a	1048	370	7373	6949	3935	1870	120	P	128	224	118	46	2386	P	P			795	795
<i>Nephrocytium limneticum</i>				P			P	P					P		P				
<i>Ooedogonium</i> sp.																			
<i>Oocystis elliptica</i>		739		P	185	185	2044	2739	552	374	1427	576	6818					2273	2273
<i>Oocystis lacustris</i>	1048	2957	1743	445259	112752	110837	120		2934		764	724		2045	3564	1870		1033	
<i>Oocystis solitaria</i>																			
<i>Oonephris obesa</i>		P	P	2138	535	535							379	370	P			250	125
<i>Quadrigula closterioides</i>																			
<i>Phacotus</i> sp.																			
<i>Pandorina morum</i>																			
<i>Pediastrum boryanum</i>																			
<i>Pediastrum boryanum</i> v. <i>ellesmerense</i>																			
<i>Pediastrum duplex</i>		P																	
<i>Pediastrum duplex</i> v. <i>clathratum</i>				P	P														
<i>Pediastrum integrum</i> v. <i>scutum</i>																			
<i>Pediastrum tetras</i>	P							P											

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	A5-6						A7-8											
	July 1998						July 1997					July 1998						
	Rep 1	Rep 2	Rep 3	Rep 5	Mean	SE	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	
<i>Penium</i> sp.																		
<i>Penium margaritaceum</i>																		
<i>Pleurotaenium</i> sp.		P												P				
<i>Pleurotaenium trabecula</i>																		
<i>Protoderma</i> sp.																		
<i>Scenedesmus bijuga</i>			P				240	747	P		247	176						
<i>Scenedesmus acuminatus</i>			P															
<i>Scenedesmus arcuatus</i>																		
<i>Scenedesmus denticulatis</i>			P	P	P													
<i>Scenedesmus ecomis</i>																		
<i>Scenedesmus incrassatulus</i>	762	2727	17431	2851	5943	3859	1082	498	510	P	523	221	8181	5454	5702	6446	871	
<i>Scenedesmus obliquus</i>																		
<i>Scenedesmus quadricauda</i>										P								
<i>Scenedesmus spinosus</i>																		
<i>Scenedesmus wisconsinensis</i>																		
<i>Spirogyra</i> sp.				1425	356	356												
<i>Staurastrum</i> sp. a	P	1109	P	P	277	277	240	125	P	747	278	164	1139	P	P	380	380	
<i>Staurastrum</i> sp. b		P	P											P	P			
<i>Staurastrum</i> sp. c																		
<i>Staurastrum anatinum</i> v. <i>biradiatum</i>																		
<i>Staurastrum antilopaeum</i>																		
<i>Staurastrum anatinum</i>																		
<i>Staurastrum apiculatum</i>				P														
<i>Staurastrum borgeanum</i>	P	P	922	P	231	231				P			682	739	P	474	237	
<i>Staurastrum brebissonii</i>			1843		461	461			P									
<i>Staurastrum clevei</i>																		
<i>Staurastrum curvatum</i>																		
<i>Staurastrum cuspidatum</i>																		
<i>Staurastrum dejectum</i>	P	P	461	P	115	115		374	P		94	94	P	P				
<i>Staurastrum furcigerum</i>																		
<i>Staurastrum gladiusum</i>																		
<i>Staurastrum hystrix</i>																		
<i>Staurastrum longibranchiatum</i>																		
<i>Staurastrum lunatum</i>																		
<i>Staurastrum manfeldtii</i>																		
<i>Staurastrum pachyrhynchum</i>			P				P	P					379	P		126	126	
<i>Staurastrum pilosum</i>																		
<i>Staurastrum proboscidium</i>																		
<i>Staurastrum rhabdophorum</i>																		
<i>Staurastrum subcruciatum</i>																		
<i>Staurastrum tetracerum</i>				P														
<i>Staurastrum varians</i>				P														
<i>Staurastrum triangularis</i>	191				48	48									P			
<i>Stigeoclonium</i> sp.																		
<i>Teilingia granulata</i>		4091	5229	2138	2865	1148	721	2366	128	P	804	544	8863	11590	3564	8006	2356	
<i>Tetraedron tumidulum</i>							P	P	128		32	32	682	P		227	227	
<i>Tetraedron limneticum</i>																		
<i>Tetraedron minimum</i>	P	682	36606	7127	11104	8651	240	125	255		155	59	2045	P	P	682	682	
<i>Tetraedron muticum</i>	191	P	P	417	152	99							682			227	227	
<i>Tetraedron arthrodesmiforme</i>																		
<i>Tetraedron caudatum</i>																		
<i>Tetraedron trigonum</i>																		
<i>Trochiscia granulata</i>																		
<i>Xanthidium antilopaeum</i>			P															
<i>Xanthidium subhastiferum</i> v. <i>murrayi</i>																		
<i>Zygnema</i> sp.	15625	32712	33179	21452	25742	4327	3246	1297	2626	P	1792	723	31190	11089	46252	29510	10185	
CYANOPHYTA (Cyanobacteria)																		
<i>Agmenellum quadruplicatum</i>	P																	
<i>Agmenellum thermale</i>		8181	P	P	2045	2045	3967		1020	P	255	255	10908			3636	3636	
<i>Anabaena</i> sp.								4482	P		1121	1121						
<i>Anabaena lapponica</i>																		
<i>Anabaena planctonica</i>																		
<i>Anacystis dimidiata</i>	572	2045	P		654	483			383		96	96	4091	2727	P	2273	1203	
<i>Anacystis marina</i>		76357			19089	19089			33162		8291	8291						
<i>Anacystis montana</i>		25225	90642	9978	31461	20397			9587		2397	2397						
<i>Anacystis thermalis</i>																		
<i>Aphanocapsa elachista</i>		13635			3409	3409				7545	1886	1886		6818	9978	5599	2944	
<i>Aphanocapsa elachista</i> v. <i>planctonica</i>	22706		130734		38360	31253	23562	49928	15050		22135	10467	34770	59994	90518	61761	16117	
<i>Aphanothece clathrata</i>	9337		P		2334	2334		3486		1121	1152	822			19957	6652	6652	
<i>Chlorogloea microcystoides</i>							1322	3611	91705	35709	33087	21057						
<i>Chroococcus turgidus</i>							240	5976	P		1554	1475						
<i>Coccolochloris aeruginosa</i>																		
<i>Coelosphaerium kuetzingianum</i>																		
<i>Dactylococcopsis linearis</i>	P	P		P									7499	P		2500	2500	
<i>Desmonema wrangellii</i>							21158	2490	P		5912	5116						
<i>Dichothrix gypsumphila</i>	30870	12198	322478	13542	94772	76021	71648	207058	47191	20917	86704	41434	7499	8501	156091	57364	49365	
<i>Gloeothece linearis</i> v. <i>composite</i>							3246	P	255		875	793			713	238	238	
<i>Gomphosphaeria lacustris</i>		25874	515965	72700	153635	121710		P	11455		2864	2864		P				
<i>Lyngbya birgei</i>																		
<i>Lyngbya contorta</i>																		
<i>Microcoleus vaginatus</i>	191				48	48	2525	P	P		631	631						
<i>Microcystis flos-aquae</i>	27630	P	P		6908	6908	6972			P	1743	1743	P	165962	7127	57696	54172	
<i>Nostoc commune</i>	P	P	95872	13542	27354	23061	2765	8840	P	P	2901	2084	57267	16633		24633	17009	
<i>Oncobrysa cesatii</i>																		
<i>Oscillatoria</i> sp.																		
<i>Oscillatoria limosa</i>													11590	4436	44903	20310	12469	
<i>Pseudanabaena</i> sp.																		
<i>Schizogonium murale</i>																		
<i>Schizothrix calcicola</i>	133196	355876	1563582	265140	579449	331214	93527	186141	41197	85762	101657	30430	587718	381783	617949	529150	74199	
<i>Scopulonema minus</i>	13434	79084	67110		39907	19511							117262	116580	31717	88520	28402	
<i>Stigonema mammosum</i>								8716			2179	2179						
Unidentified Cyanophyte akinete																		
Total Algal Density (No. cells/cm²)	312493	997466	3519709	1355247	1546229	6924												

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	B1-2										B3-4					
	July 1997					July 1998					July 1998					
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE
BACILLARIOPHYTA (Diatoms)																
<i>Achnanthes detha</i>	2092	3399	3661	3051	485											
<i>Achnanthes flexella</i>	697	P	P	232	232	P	P	P	P			P	P	P		
<i>Achnanthes lanceolata</i>																
<i>Achnanthes minutissima</i>	67808	51902	114262	77991	18708	1219	3637	2162	11200	4554	2270	44159	4093	15601	21284	11910
<i>Achnanthes minutissima v. cryptocephala</i>	697	261	5099	2019	1545	99		85	523	177	117	2835			945	945
<i>Amphipleura</i> sp.																
<i>Amphora</i> sp.																
<i>Amphora ovalis</i>		P	P			66	P	P		17	17	P		349	116	116
<i>Amphora ovalis v. pediculus</i>																
<i>Anomooneis</i> sp.																
<i>Anomooneis vitrea</i>									349	87	87					
<i>Asterionella formosa</i>																
<i>Caloneis</i> sp.						214			P	54	54	P	P			
<i>Caloneis ventricosa</i>						P		P				P				
<i>Caloneis ventricosa v. truncatula</i>	P	P	P													
<i>Cocconeis diminuta</i>																
<i>Cocconeis pediculus</i>																
<i>Cocconeis placentula</i>																
<i>Cocconeis placentula v. euglypta</i>																
<i>Cocconeis</i> sp.																
<i>Coscinodiscus denarius</i>																
<i>Coscinodiscus lacustris</i>																
<i>Cyclotella</i> sp.																
<i>Cyclotella antiqua</i>		523	523	349	174	33	P	256	P	72	62					
<i>Cyclotella comta</i>	349			116	116											
<i>Cyclotella glomerata</i>						33				8	8	P		P		
<i>Cyclotella kutzingiana</i>												P				
<i>Cyclotella meneghiniana</i>																
<i>Cyclotella ocellata</i>																
<i>Cyclotella striata</i>						P	P		P	52	31	P		P		
<i>Cymbella affinis</i>								85	125					872	291	291
<i>Cymbella amphioxys</i>																
<i>Cymbella aspera</i>																
<i>Cymbella cistula</i>																
<i>Cymbella cuspidata</i>																
<i>Cymbella cymbiformis</i>			P													
<i>Cymbella cymbiformis v. nonpunctata</i>		P	523	174	174											
<i>Cymbella gracilis</i>									P	349	87	87	61	174	78	51
<i>Cymbella lanceolata</i>																
<i>Cymbella mexicanum v. janischii</i>																
<i>Cymbella minuta</i>	1917	784	1046	1249	342	198	189	85	1395	467	310	7997	485	1598	3360	2341
<i>Cymbella naviculiformis</i>																
<i>Cymbella sinuata</i>																
<i>Cymbella tumida</i>																
<i>Cymbella turgida</i>	P	P	103	34	34											
<i>Cymbella turgidula</i>																
<i>Cymbella</i> sp.	1046	P		349	349				385	P	96	96	27	61	29	18
<i>Denticula tenuis</i>	349	P	P	116	116	33	P	P	P	8	8	P	61	20	20	
<i>Diatoma elongatum</i>	3138	3966	17299	8134	4589	58	P	P	640	174	156	2616	273	2026	1638	704
<i>Diatoma vulgare</i>																
<i>Didymosphenia geminata</i>	P	138	636	258	193	P	P	P	P							
<i>Diploneis</i> sp.																
<i>Diploneis elliptica</i>	P															
<i>Diploneis finnica</i>																
<i>Diploneis interrupta</i>																
<i>Diploneis ovalis</i>																
<i>Epithemia sorex</i>	136	P	413	183	122	33	94	114	174	104	29	P	P	P		
<i>Eunotia arcus</i>																
<i>Eunotia exigua</i>																
<i>Eunotia flexuosa</i>																
<i>Eunotia glacialis</i>	P	261	P	87	87							218	P	349	189	102
<i>Eunotia major</i>																
<i>Eunotia papilio</i>																
<i>Eunotia praeurupta</i>	1494	P	1307	934	470	33	P	P	P	8	8	1090	141	444	558	280
<i>Eunotia praeurupta v. bidens</i>												P				
<i>Eunotia sudetica</i>																
<i>Eunotia</i> sp.																
<i>Fragilaria brevistriata</i>																
<i>Fragilaria construens</i>																
<i>Fragilaria crotonensis</i>	697	1046	1569	1104	253	P			P			872		P	291	291
<i>Fragilaria intermedia</i>																
<i>Fragilaria pinnata</i>	349	1927	2477	1584	638	P	850	598	P	362	215	P	P	872	291	291
<i>Frustulia vulgaris</i>																
<i>Gomphonema</i> sp.																
<i>Gomphonema acuminatum</i>																
<i>Gomphonema acuminatum v. coronata</i>		P														
<i>Gomphonema angustatum</i>		523		174	174				P	58	14	14	P	P	P	
<i>Gomphonema constrictum</i>	P		523	174	174											
<i>Gomphonema gracile</i>																
<i>Gomphonema intricatum v. vibrio</i>																
<i>Gomphonema olivaceum</i>																
<i>Gomphonema parvulum</i>																
<i>Gyrosigma</i> sp.																
<i>Hantzschia amphioxys</i>																
<i>Melosira</i> sp.																
<i>Melosira granulata</i>																
<i>Meridion circulare</i>																
<i>Navicula</i> sp.																
<i>Navicula amphibola</i>																
<i>Navicula anglica</i>																
<i>Navicula aspera</i>																
<i>Navicula bacillum</i>																
<i>Navicula decussis</i>																
<i>Navicula dolosa</i>																
<i>Navicula capitata</i>																
<i>Navicula cryptocephala</i>	349	523	P	291	154	231	779	1367	915	823	234	P	184	P	61	61
<i>Navicula cryptocephala v. intermedia</i>	1743	5229		2324	1537											
<i>Navicula cuspidata</i>																

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	B1-2											B3-4				
	July 1997					July 1998						July 1998				
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE
<i>Navicula exigua</i>	P		P													
<i>Navicula exigua</i> v. <i>capitata</i>																
<i>Navicula lacustris</i>																
<i>Navicula laevis</i>																
<i>Navicula lanceolata</i>							1228	683	P	478	297	872	545	850	756	106
<i>Navicula mutica</i>																
<i>Navicula placenta</i>																
<i>Navicula pseudoscutiformis</i>																
<i>Navicula pupula</i>								P				P				
<i>Navicula radiosa</i>	1046	413	981	813	201	33	283	P	263	145	74		35	P	12	12
<i>Navicula reinhardtii</i>																
<i>Navicula rhynchocephala</i>																
<i>Navicula tripunctata</i>																
<i>Navicula tripunctata</i> v. <i>schizonemoides</i>																
<i>Navicula viridula</i>																
<i>Nedium</i> sp.							95	57	P	38	23	P		639	213	213
<i>Nedium bisulcatum</i>																
<i>Nedium dubium</i>																
<i>Nedium hitchcockii</i>												P				
<i>Nedium iridis</i> v. <i>amphigomphus</i>																
<i>Nitzschia</i> sp.																
<i>Nitzschia acicularis</i>																
<i>Nitzschia amphibia</i>												P				
<i>Nitzschia angustata</i>												P				
<i>Nitzschia dissipata</i>																
<i>Nitzschia filiformis</i>	349			116	116	33	P	85	523	160	122		P	349	116	116
<i>Nitzschia fonticola</i>						P	P	P								
<i>Nitzschia palea</i>																
<i>Nitzschia sigmoidea</i>												P		P		
<i>Pinnularia</i> sp.												P		P		
<i>Pinnularia biceps</i>												P		P		
<i>Pinnularia borealis</i>								P								
<i>Pinnularia maior</i>																
<i>Pinnularia mesolepta</i>								P	P			P				
<i>Pinnularia nodosa</i>																
<i>Pinnularia streptorraphe</i>																
<i>Pinnularia viridis</i>																
<i>Rhizosolenia longiseta</i>																
<i>Rhoicosphenia curvata</i>									P							
<i>Rhopalodia gibba</i>	P	P							P	25	25	P		P		
<i>Rhopalodia gebberula</i>																
<i>Stauroneis anceps</i>	P	P										P	P	P		
<i>Stauroneis phoenicenteron</i>																
<i>Stauroneis smithii</i>												P		P		
<i>Stauroneis</i> sp.																
<i>Stephanodiscus astraera</i>																
<i>Surirella</i> sp.																
<i>Surirella angustata</i>																
<i>Synedra actinastroides</i>	2848	7072	11767	7229	2576	611	3511	3548	4924	3149	908	13594	1622	3767	6328	3686
<i>Synedra acus</i>						P							P			
<i>Synedra</i> sp.																
<i>Synedra ulna</i>	136	261	2050	816	618		P	64	P	16	16	P		P		
<i>Tabellaria fenestrata</i>	P	1307	3661	1656	1071	66	P	P	P	17	17	P	P	P		
<i>Tabellaria flocculosa</i>	611	1307	16080	5999	5044	132	189	940	855	529	214	218	333	P	184	98
CRYPTOPHYTA (Cryptomonads)																
<i>Cryptomonas curvata</i>																
<i>Cryptomonas erosa</i>																
<i>Cryptomonas ovata</i>																
<i>Cryptomonas reflexa</i>																
<i>Katablepharis ovalis</i>																
<i>Rhodomonas minuta</i>		261		87	87											
CHRYSTOPHYTA (Golden-Brown Algae)																
<i>Chrysidastrum catenatum</i>	349	1046		465	307								61	1569	543	513
<i>Chrysococcus</i> sp.																
<i>Chrysoikos</i> sp.																
<i>Chrysoisphaerella rodhei</i>																
<i>Dinobryon crenulatum</i>																
<i>Dinobryon divergens</i>	679	261	4968	1969	1504	33	P	427	349	202	109	218	P	P	73	73
<i>Dinobryon sertularia</i>	P					P	94		174	67	42	927	303	349	526	201
<i>Dinobryon sertularia</i> v. <i>protuberans</i>	272	P		91	91	66			174	60	41	P				
<i>Dinobryon sociale</i>			523	174	174		P	85	263	87	62	218	61	174	151	47
<i>Dinobryon tabellariae</i>									174	44	44			P		
<i>Ishtmochloron trispinatum</i>									88	22	22					
<i>Kephyrion</i> sp.							P									
<i>Kephyrion boreale</i>									P							
<i>Ochromonas</i> sp.									523	131	131					
<i>Ochromonas stellaris</i>																
<i>Ophiocytium</i> sp.																
<i>Pseudokephyrion</i> sp.																
<i>Stichogloea doederleinii</i>									P				182		61	61
<i>Synura</i> sp.																
<i>Unidentified statospore</i>	2440	2876	P	1772	895				523	131	131	436	61		166	136
PYRROPHYTA (Dinoflagellates)																
<i>Glenodinium</i> sp.																
<i>Gymnodinium</i> sp.																
<i>Gymnodinium uberrimum</i>			P									P				
<i>Peridinium</i> sp.	136		P	45	45				P	87	22					
<i>Peridinium aciculiferum</i>	697	P	1569	755	454	P			P	P		P	P	174	58	58
<i>Peridinium cinctum</i>																
<i>Peridinium palatinum</i>																
<i>Peridinium palustre</i>																
<i>Peridinium willei</i>																
<i>Unidentified cyst</i>																
EUGLENOPHYTA																
<i>Euglena</i> sp.			P													
<i>Phacus</i> sp.													P			
<i>Trachelomonas</i> sp.								P				P				

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	B1-2										B3-4					
	July 1997					July 1998					July 1998					
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE
CHLOROPHYTA (Green Algae)																
<i>Actinotaenium</i> sp.																
<i>Ankistrodesmus convolutus</i>																
<i>Ankistrodesmus falcatus</i>		P														
<i>Ankistrodesmus falcatus</i> v. <i>spiralis</i>	P	P	2615	872	872	P		P	697	174	174	436	243	1743	807	471
<i>Ankistrodesmus gelifactus</i>																
<i>Arthrodesmus triangularis</i>																
<i>Binuclearia</i> sp.							P	P								
<i>Botryococcus</i> sp.								P				P				
<i>Bulbochaete</i> sp.		550	P	183	183	33	P	3077	174	821	753	P	121	283	135	82
<i>Chlamydomonas</i> sp. a																
<i>Chlamydomonas</i> sp. b																
<i>Closterium</i> sp.									P					P		
<i>Closterium acerorum</i>																
<i>Closterium actum</i>																
<i>Closterium diana</i>																
<i>Closterium pseudolunula</i>																
<i>Closterium rostratum</i>																
<i>Coeloastrum</i> sp.									P	175	44	44				
<i>Coeloastrum cambricum</i>											236	236				
<i>Coeloastrum microporum</i>			P			P	945	283			71	71				
<i>Coeloastrum printzii</i>								P	P	174	44	44	654		218	218
<i>Coeloastrum sphaericum</i>	1394	550	826	923	248								P		509	509
<i>Cosmarium</i> sp.									P	85	21	21				
<i>Cosmarium anceps</i>						P										
<i>Cosmarium biculatum</i>																
<i>Cosmarium botrytis</i>	136		310	149	90											
<i>Cosmarium capitulum</i> v. <i>groenlandicum</i>																
<i>Cosmarium contracta</i>																
<i>Cosmarium coronatum</i>																
<i>Cosmarium depressum</i>		275	740	338	216											
<i>Cosmarium granulatum</i>	272	P	746	339	218	69	94	P	P	41	24			P		
<i>Cosmarium holmiense</i> v. <i>intermedium</i>	P					33				8	8					
<i>Cosmarium humile</i> v. <i>lacustre</i>	136	2092	550	926	595		94		P	175	67	42	218	P	73	73
<i>Cosmarium impressulum</i> v. <i>suborthogonum</i>		P					P	P	P				P			
<i>Cosmarium laeve</i>																
<i>Cosmarium norimbergense</i>	407		138	182	120		P	P					P			
<i>Cosmarium phaseolus</i> v. <i>phaseolus</i>							12	P	29	10	7	218	243	348	270	40
<i>Cosmarium pokornyanam</i>																
<i>Cosmarium pseudoprotuberans</i>	P		P													
<i>Cosmarium rectangulare</i>		P							P	174	44	44	P	P		
<i>Cosmarium rectangulum</i>										P			P			
<i>Cosmarium reniforme</i>									P							
<i>Cosmarium repandum</i>																
<i>Cosmarium septentrionale</i>						33	189	P	196	105	51	218	61	174	151	47
<i>Cosmarium speciosum</i>	3835	516	1800	2050	966		P	P					P	P		
<i>Cosmarium subgranatum</i>																
<i>Cosmarium tetraophthalmum</i>							P		P			P				
<i>Cosmarium turpinii</i>	181	P	230	137	70				P	131	33	33	218	P	P	73
<i>Cosmarium turpinii</i> v. <i>podolicum</i>																
<i>Crucigenia apiculata</i>																
<i>Crucigenia quadrata</i>	P	P														
<i>Crucigenia rectangularis</i>		P	P										P			
<i>Cylindrocapsa brebissonii</i>		P														
<i>Desmidiium swartzii</i> v. <i>quadrangulatum</i>	P		P					94	P	P	24	24				
<i>Dictyosphaerium pulchellum</i>																
<i>Elakatothrix</i> sp.						P	P	114	174	72	43	654	P	P	218	218
<i>Euastrum richteri</i>																
<i>Euastrum</i> sp.																
<i>Euastrum bidentatum</i>						33			P	8	8					
<i>Euastrum denticulatum</i>																
<i>Euastrum dubium</i> v. <i>maius</i>	P	138	P	46	46	P			P	P		P	P	P		
<i>Euastrum elegans</i>	P		826	275	275		95	P	88	46	26	218	P	P	73	73
<i>Euastrum gemmatum</i>																
<i>Euastrum insulare</i> v. <i>silesiacum</i>																
<i>Euastrum obesum</i>																
<i>Euastrum ohioense</i>																
<i>Euastrum sinosum</i>																
<i>Euastrum verrucosum</i>													P	P		
<i>Gemmellicystis neglecta</i>																
<i>Geminella interrupta</i>																
<i>Gloeocystis schroeteri</i>	32422	15688	25451	24520	4853		P		3152	788	788	P		P		
<i>Gloeotila pelagica</i>																
<i>Golenkinia radiata</i> v. <i>brevispina</i>		P														
<i>Gonatozygon brebissonii</i>																
<i>Gonatozygon monotaenium</i>																
<i>Hyalotheca</i> sp.																
<i>Kirchneriella</i> sp.			523	174	174		94	85		45	26	218	P	349	189	102
<i>Koliella longiseta</i>																
<i>Lagerheimia subsalsa</i>																
<i>Lagerheimia wratislawiensis</i>																
<i>Micractinium pusillum</i>																
<i>Monoraphidium</i> sp.																
<i>Mougeotia</i> sp. a		P						P	P	177	44	44		121	40	40
<i>Nephrocystium limneticum</i>	P		P													
<i>Oedogonium</i> sp.									P							
<i>Oocystis elliptica</i>	1630	1046	1101	1259	186	552	1039	4701		1573	1064	4797	P	2876	2558	1394
<i>Oocystis lacustris</i>	5927	5752	12550	8076	2237	2505	10944	4787	12550	7697	2407		2850		950	950
<i>Oocystis solitaria</i>														P		
<i>Oonophris obesa</i>								P	256	174	108	64				
<i>Quadrigula closterioides</i>																
<i>Phacotus</i> sp.	349	261		203	105			P								
<i>Pandorina morum</i>																
<i>Pediastrum boryanum</i>	P	P	P													
<i>Pediastrum boryanum</i> v. <i>ellesmerense</i>	P	P										P	P	2666	889	889
<i>Pediastrum duplex</i>		P	P													
<i>Pediastrum duplex</i> v. <i>clathratum</i>	P															
<i>Pediastrum integrum</i> v. <i>scutum</i>																
<i>Pediastrum tetras</i>	P	3138	2092	1743	922		P	513	P	128	128	P	273		91	91

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	B1-2										B3-4					
	July 1997					July 1998					July 1998					
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE
<i>Penium</i> sp.			P									P				
<i>Penium margaritaceum</i>																
<i>Pleurotaenium</i> sp.																
<i>Pleurotaenium trabecula</i>																
<i>Protoderma</i> sp.																
<i>Scenedesmus bijuga</i>	1222	523	2092	1279	454	P		171		43	43					
<i>Scenedesmus acuminatus</i>		P	P					342		86	86		P	P		
<i>Scenedesmus arcuatus</i>																
<i>Scenedesmus denticulatis</i>																
<i>Scenedesmus ecornis</i>																
<i>Scenedesmus incrassatulus</i>	3835	3399	1569	2934	694	198	P	P	P	50	50	5451	667	2266	2795	1406
<i>Scenedesmus obliquus</i>																
<i>Scenedesmus quadricauda</i>	2766	1830	P	1532	812	P	4345	P	697	1261	1041	1745	P	P	582	582
<i>Scenedesmus spinosus</i>													P	P		
<i>Scenedesmus wisconsinensis</i>																
<i>Spirogyra</i> sp.																
<i>Staurastrum</i> sp. a																
<i>Staurastrum</i> sp. b			P				94	P	P	24	24	P	P	P		
<i>Staurastrum</i> sp. c																
<i>Staurastrum anatinum</i> v. <i>biradiatum</i>																
<i>Staurastrum antilopaeum</i>																
<i>Staurastrum anatinum</i>																
<i>Staurastrum apiculatum</i>		P							174	44	44					
<i>Staurastrum borgeanum</i>	91	P	688	260	216				P	P						
<i>Staurastrum brebissonii</i>									P							
<i>Staurastrum clevei</i>																
<i>Staurastrum curvatum</i>																
<i>Staurastrum cuspidatum</i>																
<i>Staurastrum dejectum</i>	136	P	69	68	39		P		218	54	54			P		
<i>Staurastrum furcigerum</i>																
<i>Staurastrum gladiusum</i>																
<i>Staurastrum hystrix</i>																
<i>Staurastrum longibranchiatum</i>																
<i>Staurastrum lunatum</i>																
<i>Staurastrum manfeldtii</i>																
<i>Staurastrum pachyrhynchum</i>			P													
<i>Staurastrum pilosum</i>	P	138	183	107	55											
<i>Staurastrum proboscidioidum</i>																
<i>Staurastrum rhabdophorum</i>																
<i>Staurastrum subcruciatum</i>			P													
<i>Staurastrum tetracerum</i>									88	22	22					
<i>Staurastrum varians</i>																
<i>Staurastrum triangularis</i>																
<i>Stigeoclonium</i> sp.																
<i>Tetlingia granulata</i>	349	523	1046	639	209	165	94	171	1220	413	270	2399	243	1046	1229	629
<i>Tetraedron tumidulum</i>																
<i>Tetraedron limneticum</i>																
<i>Tetraedron minimum</i>	349		523	291	154			171	P	43	43	872	P		291	291
<i>Tetraedron muticum</i>										174	44	P				
<i>Tetraedron arthrodesmiforme</i>																
<i>Tetraedron caudatum</i>									P	174	44					
<i>Tetraedron trigonum</i>																
<i>Trochiscia granulata</i>																
<i>Xanthidium antilopaeum</i>		P	P													
<i>Xanthidium subhastiferum</i> v. <i>murrayi</i>																
<i>Zygnema</i> sp.			413	138	138									P		
CYANOPHYTA (Cyanobacteria)																
<i>Agmenellum quadruplicatum</i>	P	P	P													
<i>Agmenellum thermale</i>	4681			1560	1560		4723	13162	P	4471	3103	3489	P		1163	1163
<i>Anabaena</i> sp.	P		18826	6275	6275							1526		444	657	453
<i>Anabaena lapponica</i>	P	P	P													
<i>Anabaena planctonica</i>																
<i>Anacystis dimidiata</i>								171		43	43			697	293	209
<i>Anacystis marina</i>												6973			2324	2324
<i>Anacystis montana</i>						P			13073	3268	3268					
<i>Anacystis thermalis</i>		5229		1743	1743	7250				1813	1813			P		
<i>Aphanocapsa elachista</i>									45670	11417	11417			7147	2382	2382
<i>Aphanocapsa elachista</i> v. <i>planctonica</i>	83670	67459	73734	74954	4719	1648	1889	23077		6654	5491	13956	3820	5229	7668	3170
<i>Aphanothece clathrata</i>																
<i>Chlorogloea microcystoides</i>																
<i>Chroococcus turgidus</i>	2789	P	2092	1627	838											
<i>Coccochloris aeruginosa</i>												872			291	291
<i>Coelosphaerium kuetzingianum</i>																
<i>Dactylococcopsis linearis</i>								661	684	523	467	160				
<i>Desmonema wrangelii</i>	9915	20917	33991	21608	6959					P						
<i>Dichoathrix gypsophila</i>	19523	321083	140670	160425	87611	7217	5574	6496	32771	13014	6594	64985	74848	38872	59568	10733
<i>Gloeotheca linearis</i> v. <i>composite</i>	P	P	P													
<i>Gomphosphaeria lacustris</i>	72514	4183	30330	35676	19906	P	15492	36752	57000	27311	12437	32054	P	P	10685	10685
<i>Lyngbya birgei</i>																
<i>Lyngbya contorta</i>																
<i>Microcoleus vaginatus</i>		P	P	P												
<i>Microcystis flos-aquae</i>										P						
<i>Nostoc commune</i>			P			6393	1606	92649	35959	34152	20926	2617	1031		1216	761
<i>Oncobrysa cesatii</i>																
<i>Oscillatoria</i> sp.																
<i>Oscillatoria limosa</i>								P	P							
<i>Pseudanabaena</i> sp.	2092			697	697									1152	384	384
<i>Schizogonium murale</i>																
<i>Schizothrix calcicola</i>	68330	35298	231138	111589	60530	16444	18232	75982	249615	90068	54950	73053	23767	58220	51680	14599
<i>Scopulonema minus</i>									174	44	44	3271	4002	2266	3180	503
<i>Stigonema mamillosum</i>																
Unidentified Cyanophyte akinete																
Total Algal Density (No. cells/cm²)	411375	575874	778902	588717	106290	45797	77643	274557	482395	220098	101011	291962	129159	154903	192008	50527

^a P = present, but not encountered during routine cell counts; SE = standard error.

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	B4-5										B5-6						
	July 1997					July 1998					July 1998						
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE
BACILLARIOPHYTA (Diatoms)																	
<i>Achnanthes oetha</i>																	
<i>Achnanthes flexella</i>	P	P	261	87	87		P	335	P	84	84	P	P	P	P		
<i>Achnanthes lanceolata</i>							P	414		103	103						
<i>Achnanthes minutissima</i>	21877	11029	14773	15893	3181	16462	13740	11068	29671	17735	4128	3401	2503	2030	3293	2807	327
<i>Achnanthes minutissima</i> v. <i>cryptocephala</i>	261	134		132	75		P	335		84	84	680	179	706	775	585	137
<i>Amphipleura</i> sp.									P								
<i>Amphora</i> sp.									P								
<i>Amphora ovalis</i>			P				P	P	P			340	P	P		85	85
<i>Amphora ovalis</i> v. <i>pediculus</i>														P			
<i>Anomoeoneis</i> sp.									P								
<i>Anomoeoneis vitrea</i>									P								
<i>Asterionella formosa</i>									P						P		
<i>Caloneis</i> sp.								P	P								
<i>Caloneis ventricosa</i>							P					P					
<i>Caloneis ventricosa</i> v. <i>truncatula</i>			P					P									
<i>Cocconeis diminuta</i>							P										
<i>Cocconeis pediculus</i>																	
<i>Cocconeis placentula</i>																	
<i>Cocconeis placentula</i> v. <i>euglypta</i>																	
<i>Cocconeis</i> sp.		268		89	89				P								
<i>Coccinodiscus denarius</i>															P		
<i>Coccinodiscus lacustris</i>																	
<i>Cyclotella</i> sp.																	
<i>Cyclotella antiqua</i>	261		P	87	87		P	P	414	103	103	P	P	P	P		
<i>Cyclotella comta</i>																	
<i>Cyclotella glomerata</i>							P	335	P	84	84	P	P	177	P	44	44
<i>Cyclotella kutzingiana</i>							P					P					
<i>Cyclotella meneghiniana</i>																	
<i>Cyclotella ocellata</i>																	
<i>Cyclotella striata</i>							P	P	P								
<i>Cymbella affinis</i>													P	P			
<i>Cymbella amphioxys</i>																	
<i>Cymbella aspera</i>																	
<i>Cymbella cistula</i>							620		P	155	155						
<i>Cymbella cuspidata</i>																	
<i>Cymbella cymbiformis</i>																	
<i>Cymbella cymbiformis</i> v. <i>nonpunctata</i>	175		P	58	58												
<i>Cymbella gracilis</i>							P	P	P			P	P	P	P		
<i>Cymbella lanceolata</i>																	
<i>Cymbella mexicana</i> v. <i>janischii</i>																	
<i>Cymbella minuta</i>	P	939	523	487	272	1318	P	335	414	517	282	340	358	177	194	267	48
<i>Cymbella naviculiformis</i>							P					P			P		
<i>Cymbella sinuata</i>																	
<i>Cymbella tumida</i>																	
<i>Cymbella turgida</i>	261	P	P	87	87	282	P			71	71						
<i>Cymbella turgidula</i>																	
<i>Cymbella</i> sp.								671	414	271	165						
<i>Denticula tenuis</i>		P					P	335	212	137	83	P	179	P	194	93	54
<i>Diatoma elongatum</i>	13596	10029	11222	11616	1048	13640	15445	11739	9870	12673	1202	49656	50461	139155	43125	70599	22911
<i>Diatoma vulgare</i>																	
<i>Didymosphenia geminata</i>																	
<i>Diploneis</i> sp.							P						P				
<i>Diploneis elliptica</i>									P								
<i>Diploneis finnica</i>																	
<i>Diploneis interrupta</i>																	
<i>Diploneis ovalis</i>								P									
<i>Epithemia sorex</i>	P	P				P	P	P	212	53	53		P		P		
<i>Eunotia arcus</i>								P									
<i>Eunotia exigua</i>																	
<i>Eunotia flexuosa</i>																	
<i>Eunotia glacialis</i>							P	335	P	84	84						
<i>Eunotia major</i>																	
<i>Eunotia papilio</i>																	
<i>Eunotia praerupta</i>	P	312	P	104	104	P	3099	P	P	775	775	651	715	1059	P	606	221
<i>Eunotia praerupta</i> v. <i>bidens</i>																	
<i>Eunotia sudetica</i>																	
<i>Eunotia</i> sp.		939	523	487	272												
<i>Fragilaria brevistriata</i>								P				P					
<i>Fragilaria construens</i>							2064	335	P	600	494		P				
<i>Fragilaria crotonensis</i>	P	939	1171	703	358	P	P	P	414	103	103				P		
<i>Fragilaria intermedia</i>																	
<i>Fragilaria pinnata</i>		1207	P	402	402	P	9277	3689	P	3242	2192	P	P		387	97	97
<i>Frustulia vulgaris</i>							P	P					P				
<i>Gomphonema</i> sp.																	
<i>Gomphonema acuminatum</i>																	
<i>Gomphonema acuminatum</i> v. <i>coronata</i>																	
<i>Gomphonema angustatum</i>							P	671	2794	866	662	340	P		581	230	142
<i>Gomphonema constrictum</i>	784	134	P	306	242												
<i>Gomphonema gracile</i>							P	P	P			1148	1386	323	P	714	329
<i>Gomphonema intricatum</i> v. <i>vibrio</i>						P	P	P									
<i>Gomphonema olivaceum</i>							P										
<i>Gomphonema parvulum</i>																	
<i>Gyrosigma</i> sp.																	
<i>Hantzschia amphioxys</i>																	
<i>Melosira</i> sp.																	
<i>Melosira granulata</i>																	
<i>Meridion circulare</i>																	
<i>Navicula</i> sp.															69	17	17
<i>Navicula amphibola</i>	P	P	P														
<i>Navicula anglica</i>							P										
<i>Navicula aspera</i>																	
<i>Navicula bacillum</i>																	
<i>Navicula decussis</i>																	
<i>Navicula dolosa</i>																	
<i>Navicula capitata</i>																	
<i>Navicula cryptocephala</i>		134	784	306	242	2694	3719	P	1060	1868	829	396	179	766	209	388	135
<i>Navicula cryptocephala</i> v. <i>intermedia</i>																	
<i>Navicula cuspidata</i>																	

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Species	B4-5										B5-6						
	July 1997					July 1998					July 1998						
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE
<i>Navicula exigua</i>																	
<i>Navicula exigua</i> v. <i>capitata</i>																	
<i>Navicula lacustris</i>							P	P									
<i>Navicula laevis</i>																	
<i>Navicula lanceolata</i>							3720	P	828	1137	883						
<i>Navicula mutica</i>							P										
<i>Navicula placenta</i>																	
<i>Navicula pseudoscutiformis</i>							P	P	P								
<i>Navicula pupula</i>						P	P	335	828	291	196						
<i>Navicula radiosa</i>	1830	805	261	965	460		P	P	P								
<i>Navicula reinhardtii</i>																	
<i>Navicula rhynchocephala</i>																	
<i>Navicula tripunctata</i>						3881	P	P		970	970						
<i>Navicula tripunctata</i> v. <i>schizonemoides</i>																	
<i>Navicula viridula</i>						141	620	2740	778	1070	573						
<i>Nedium</i> sp.									P								
<i>Nedium bisulcatum</i>																	
<i>Nedium dubium</i>																	
<i>Nedium hitchcockii</i>																	
<i>Nedium iridis</i> v. <i>amphigomphus</i>	P	P															
<i>Nitzschia</i> sp.						P			P			P					
<i>Nitzschia acicularis</i>									P								
<i>Nitzschia amphibia</i>																	
<i>Nitzschia angustata</i>									P						P		
<i>Nitzschia dissipata</i>																	
<i>Nitzschia filiformis</i>	P	P	1700	567	567	564	3719	8720	P	3251	1998	P	P		146	37	37
<i>Nitzschia fonticola</i>								P				P	P	P			
<i>Nitzschia palea</i>																	
<i>Nitzschia sigmoidea</i>		P					P										
<i>Pinnularia</i> sp.	P						P	P	P				P				
<i>Pinnularia biceps</i>																	
<i>Pinnularia borealis</i>							P										
<i>Pinnularia maior</i>																	
<i>Pinnularia mesolepta</i>							P										
<i>Pinnularia nodosa</i>																	
<i>Pinnularia streptoraphe</i>																	
<i>Pinnularia viridis</i>																	
<i>Rhizosolenia longiseta</i>																	
<i>Rhoicosphenia curvata</i>									P								
<i>Rhopalodia gibba</i>	P	P	P			P	P	P	P								
<i>Rhopa;pdoa gebberula</i>																	
<i>Stauroneis anceps</i>		P				P	P	P	P			P					
<i>Stauroneis phoenicenteron</i>																	
<i>Stauroneis smithii</i>																	
<i>Stauroneis</i> sp.																	
<i>Stephanodiscus astraea</i>																	
<i>Surirella</i> sp.																	
<i>Surirella angustata</i>																	
<i>Synedra actinastroides</i>	4837	4404	4052	4431	227	7597	14875	10843	13802	11779	1634	34848	1997	3575	1888	10577	8099
<i>Synedra acus</i>						401	620	P	414	359	130	85	656	58	275	269	138
<i>Synedra</i> sp.							1509	293		451	360						
<i>Synedra ulna</i>	692	631	546	623	42	1331	P	P	P	333	333	255	P	P	80	84	60
<i>Tabellaria fenestrata</i>	1307	402	1177	962	283	1504	1411	671	1105	1173	188	P	120	177	339	159	70
<i>Tabellaria flocculosa</i>	1046	4157	5503	3569	1320	4891	3777	9559	3415	5411	1418	1020	179	353	968	630	213
CRYPTOPHYTA (Cryptomonads)																	
<i>Cryptomonas curvata</i>													P				
<i>Cryptomonas erosa</i>		P						503		126	126						
<i>Cryptomonas ovata</i>	588	134	312	345	132		664			166	166	170				43	43
<i>Cryptomonas reflexa</i>			P														
<i>Katablepharis ovalis</i>																	
<i>Rhodomonas minuta</i>																	
CHRYSTOPHYTA (Golden-Brown Algae)																	
<i>Chrysiasterum catenatum</i>			261	87	87			671		168	168						
<i>Chrysococcus</i> sp.	261		P	87	87												
<i>Chrysoikos</i> sp.									P								
<i>Chrysoisphaerella rodheii</i>		1341		447	447												
<i>Dinobryon crenulatum</i>																	
<i>Dinobryon divergens</i>	523	134	156	271	126	P		671	P	168	168	170	179	P	92	110	42
<i>Dinobryon sertularia</i>	523	134		219	157	847	1859	335	414	864	350	794	1251	1589	2130	1441	282
<i>Dinobryon sertularia</i> v. <i>protuberans</i>	P	268	P	89	89	847	5423	671	1863	2201	1106	170	P	P	P	43	43
<i>Dinobryon sociale</i>						P	1859	335		549	444						
<i>Dinobryon tabellariae</i>								P	P								
<i>Ishtmochloron trispinatum</i>	P	134	P	45	45	P											
<i>Kephyrion</i> sp.						P	P	P	1242	310	310	P					
<i>Kephyrion boreale</i>	784	1475	1307	1189	208		1240	335		394	293		P	P			
<i>Ochromonas</i> sp.							1240	3354		1149	791						
<i>Ochromonas stellaris</i>																	
<i>Ophiocytium</i> sp.						847		P	P	212	212						
<i>Pseudokephyrion</i> sp.		P															
<i>Stichogloea doederleinii</i>						1976	9297	6037		4328	2079	850	1788	353		748	388
<i>Synura</i> sp.							P	335		84	84			P			
Unidentified statospore	784	268	P	351	230	1411	2479	2012	1242	1786	284				P		
PYRROPHYTA (Dinoflagellates)																	
<i>Glenodinium</i> sp.																	
<i>Gymnodinium</i> sp.		402	261	221	118												
<i>Gymnodinium uberrimum</i>		268	P	89	89			581	P	145	145						
<i>Peridinium</i> sp.	P					P			P			P	P	P			
<i>Peridinium aciculiferum</i>	261	P	P	87	87	P	P	P	P								
<i>Peridinium cinctum</i>		P	P			P	P		P								
<i>Peridinium palatinum</i>																	
<i>Peridinium palustre</i>																	
<i>Peridinium williei</i>																	
Unidentified cyst	261	402		221	118	1177	2479	1342		1250	507						
EUGLENOPHYTA																	
<i>Euglena</i> sp.		P															
<i>Phacus</i> sp.			P														
<i>Trachelomonas</i> sp.													P	P			

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	B4-5										B5-6						
	July 1997					July 1998					July 1998						
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE
CHLOROPHYTA (Green Algae)																	
<i>Actinotaenium</i> sp.																	
<i>Ankistrodesmus convolutus</i>																	
<i>Ankistrodesmus falcatus</i>	261	P		87	87	1129		P	828	489	289	P	P	3530		883	883
<i>Ankistrodesmus falcatus</i> v. <i>spiralis</i>	784	134	523	480	189	P	996	1677	414	772	364	170	894	883	194	535	204
<i>Ankistrodesmus gelifactoris</i>																	
<i>Arthrodesmus triangularis</i>	P					P	P	P	P					P			
<i>Binuclearia</i> sp.						282	664		1656	650	362						
<i>Botryococcus</i> sp.														P			
<i>Bulbochaete</i> sp.	1765	1073	1327	1388	202	2258	26031	P	2898	7797	6110		P		387	97	97
<i>Chlamydomonas</i> sp. a																	
<i>Chlamydomonas</i> sp. b																	
<i>Closterium</i> sp.	16	P		5	5	P	222	P	P	56	56						
<i>Closterium acerosum</i>																	
<i>Closterium actum</i>																	
<i>Closterium diana</i>			156	52	52												
<i>Closterium pseudolunula</i>																	
<i>Closterium rostratum</i>																	
<i>Coelastrum</i> sp.																	
<i>Coelastrum cambricum</i>																	
<i>Coelastrum microporum</i>							P						P	5649	1549	1800	1334
<i>Coelastrum printzi</i>						P	6640	P	2898	2384	1574		P				
<i>Coelastrum sphaericum</i>	P		P					P	3312	828	828		P				
<i>Cosmarium</i> sp.																	
<i>Cosmarium anceps</i>						P											
<i>Cosmarium biculatum</i>			468	156	156					P							
<i>Cosmarium botrytis</i>		P													P		
<i>Cosmarium capitulum</i> v. <i>groenlandicum</i>																	
<i>Cosmarium contracta</i>																	
<i>Cosmarium coronatum</i>																	
<i>Cosmarium depressum</i>		P															
<i>Cosmarium granulatum</i>		670	P	223	223	P	110	P	P	28	28			P			
<i>Cosmarium holmiense</i> v. <i>intermedium</i>						P	P	671		168	168	P		177	P	44	44
<i>Cosmarium humile</i> v. <i>lacustre</i>		939	523	487	272	282	322	P	P	151	88			P	P		
<i>Cosmarium impressulum</i> v. <i>suborthogonum</i>	P							P	371	93	93		P	P	P		
<i>Cosmarium laeve</i>																	
<i>Cosmarium norimbergense</i>							P								P		
<i>Cosmarium phaseolus</i> v. <i>phaseolus</i>	360			120	120	1693	322	2683		1175	623	P			194	48	48
<i>Cosmarium pokornyianum</i>																	
<i>Cosmarium pseudoprotuberans</i>																	
<i>Cosmarium rectangulare</i>	654			218	218		P	335		84	84		179			45	45
<i>Cosmarium rectangulum</i>																	
<i>Cosmarium reniforme</i>	1068			356	356												
<i>Cosmarium repandum</i>		P	P														
<i>Cosmarium septentrionale</i>	588			196	196	847	2849	671	1414	1445	494	P	P	P	92	23	23
<i>Cosmarium speciosum</i>			1717	572	572			P									
<i>Cosmarium subgranatum</i>												P	P	P			
<i>Cosmarium tetraophthalmum</i>		P	P			P	249		424	168	103		P	P	P		
<i>Cosmarium turpinii</i>	P	P	P			P	P	P	P								
<i>Cosmarium turpinii</i> v. <i>podolicum</i>																	
<i>Crucigenia apiculata</i>																	
<i>Crucigenia quadrata</i>							P										
<i>Crucigenia rectangularis</i>								P				P	P	706		177	177
<i>Cylindrocystis brebissonii</i>	261	134	156	184	39	P	P	335	414	187	109						
<i>Desmidiium swartzii</i> v. <i>quadrangulatum</i>																	
<i>Dictyosphaerium pulchellum</i>																	
<i>Elakatothrix</i> sp.		134	P	45	45	847		671	P	380	222						
<i>Euastropsis richteri</i>																	
<i>Euastrum</i> sp.																	
<i>Euastrum bidentatum</i>		268		89	89			P	P								
<i>Euastrum denticulatum</i>																	
<i>Euastrum dubium</i> v. <i>maius</i>		P				282	P	335	828	361	172	P	P	P	P		
<i>Euastrum elegans</i>	392	P	781	391	225	1129	3403	P	600	1283	743	P	P	P			
<i>Euastrum gemmatum</i>																	
<i>Euastrum insulare</i> v. <i>silesiacum</i>																	
<i>Euastrum obesum</i>																	
<i>Euastrum ohioense</i>																	
<i>Euastrum sinosum</i>		P															
<i>Euastrum verrucosum</i>																	
<i>Gemmelicystis neglecta</i>																	
<i>Geminella interrupta</i>													P				
<i>Gloeocystis schroeteri</i>	9151	2548	1569	4423	2381	P	2479	P	414	723	593						
<i>Gloeotila pelagica</i>		805		268	268												
<i>Golenkinia radiata</i> v. <i>brevispina</i>		134		45	45												
<i>Gonatozygon brebissonii</i>			P			P		P									
<i>Gonatozygon monotaenium</i>	P	312		104	104												
<i>Hyalotheca</i> sp.																	
<i>Kirchneriella</i> sp.								620		155	155	170	P	P	P	43	43
<i>Koliella longiseta</i>			P														
<i>Lagerheimia subsalsa</i>																	
<i>Lagerheimia wratislawiensis</i>	261			87	87												
<i>Micractinium pusillum</i>																	
<i>Monoraphidium</i> sp.																	
<i>Mougeotia</i> sp. a	4717	3710	6439	4955	797	3457	830	838	3285	2103	733	170				43	43
<i>Nephrocystium limneticum</i>	1046		P	349	349							340	P	485	P	206	123
<i>Oeodogonium</i> sp.																	
<i>Oocystis elliptica</i>						5927	16734	8720	27737	14780	4889	340		530	3341	1053	771
<i>Oocystis lacustris</i>	2549	P	3399	1983	1021												
<i>Oocystis solitaria</i>												P					
<i>Onephris obesa</i>													1073	P	P	268	268
<i>Quadrigula closterioides</i>																	
<i>Phacotus</i> sp.		3084		1028	1028	P											
<i>Pandorina morum</i>																	
<i>Pediastrum boryanum</i>	P	P	P														
<i>Pediastrum boryanum</i> v. <i>ellesmerense</i>	P	P	P										P				
<i>Pediastrum duplex</i>		P	P					P									
<i>Pediastrum duplex</i> v. <i>clathratum</i>																	
<i>Pediastrum integrum</i> v. <i>scutum</i>																	
<i>Pediastrum tetras</i>	P	P	P			P	1859			465	465			P	P		

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	B4-5											B5-6					
	July 1997					July 1998						July 1998					
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE
<i>Penium</i> sp.		P										P					
<i>Penium margaritaceum</i>																	
<i>Pleurotaenium</i> sp.																	
<i>Pleurotaenium trabecula</i>																	
<i>Protoderma</i> sp.																	
<i>Scenedesmus bijuga</i>	523			174	174				828	207	207						
<i>Scenedesmus acuminatus</i>																	
<i>Scenedesmus arcuatus</i>																	
<i>Scenedesmus denticulatus</i>						P	664		P	166	166						
<i>Scenedesmus eornis</i>																	
<i>Scenedesmus incrassatulus</i>	2092	2145	2092	2110	18	P	P	7043		1761	1761	P	P	P	1162	291	291
<i>Scenedesmus obliquus</i>																	
<i>Scenedesmus quadricauda</i>	P	P	P			1834	21914	P	848	6149	5288		P		P		
<i>Scenedesmus spinosus</i>						P		2348		587	587	680		1236		479	299
<i>Scenedesmus wisconsinensis</i>																	
<i>Spirogyra</i> sp.																	
<i>Staurastrum</i> sp. a	88	P	261	116	77	P	P		212	53	53						
<i>Staurastrum</i> sp. b						P											
<i>Staurastrum</i> sp. c		P															
<i>Staurastrum anatinum</i> v. <i>biradiatum</i>																	
<i>Staurastrum antilopaeum</i>																	
<i>Staurastrum anatinum</i>	P																
<i>Staurastrum apiculatum</i>																	
<i>Staurastrum borgeanum</i>	1307			436	436	P	P	P				P		P	P		
<i>Staurastrum brebissonii</i>	P	737		246	246		166		P	42	42	P	P	P			
<i>Staurastrum clevei</i>																	
<i>Staurastrum curvatum</i>							P	P									
<i>Staurastrum cuspidatum</i>		P	262	87	87												
<i>Staurastrum dejectum</i>		224	392	205	114	P	P	P	414	103	103	170	P	P	P	43	43
<i>Staurastrum furcigerum</i>																	
<i>Staurastrum gladiusum</i>	P		P														
<i>Staurastrum hystrix</i>																	
<i>Staurastrum longibranchiatum</i>		P															
<i>Staurastrum lunatum</i>	261			87	87												
<i>Staurastrum manfeldtii</i>																	
<i>Staurastrum pachyrhynchum</i>	P	67	P	22	22	P	322		P	81	81		P				
<i>Staurastrum pilosum</i>		134	523	219	157							P					
<i>Staurastrum proboscidium</i>																	
<i>Staurastrum rhabdophorum</i>	P																
<i>Staurastrum subcruciatum</i>	P																
<i>Staurastrum tetracerum</i>	P	P				P	620	P	22	160	153		P				
<i>Staurastrum varians</i>						P	322			81	81						
<i>Staurastrum triangularis</i>																	
<i>Stigeoclonium</i> sp.																	
<i>Tetraglia granulata</i>	2353	5162	2498	3338	913	7386	5578	1677	2898	4385	1290	340	536	530	P	352	126
<i>Tetraedron tumidulum</i>		2816		939	939	282		P		71	71						
<i>Tetraedron limneticum</i>																	
<i>Tetraedron minimum</i>	P	P	P			P	P	670	414	271	165	P	P	P	1549	387	387
<i>Tetraedron muticum</i>																	
<i>Tetraedron arthrodesmiforme</i>	261			87	87												
<i>Tetraedron caudatum</i>						P		335	P	84	84						
<i>Tetraedron trigonum</i>																	
<i>Trochiscia granulata</i>	131			44	44												
<i>Xanthidium antilopaeum</i>							P										
<i>Xanthidium subhastiferum</i> v. <i>murrayi</i>		P	P									P	P	529	P	132	132
<i>Zygnema</i> sp.																	
CYANOPHYTA (Cyanobacteria)																	
<i>Agmenellum quadruplicatum</i>	P	P						P	8049	2012	2012						
<i>Agmenellum thermale</i>			P			18909	195850	P	P	53690	47596						
<i>Anabaena</i> sp.	P					P		3689	P	922	922						
<i>Anabaena lapponica</i>		P															
<i>Anabaena planctonica</i>																	
<i>Anacystis dimidiata</i>			P			9313	1826		1060	3050	2121	5612	5900	1059	P	3143	1525
<i>Anacystis marina</i>																	
<i>Anacystis montana</i>			82101	27367	27367	33866	P	129124	5299	42072	29955	2551			6585	2284	1555
<i>Anacystis thermalis</i>		1877		626	626								29141			7285	7285
<i>Aphanocapsa elachista</i>		55914		18638	18638			8677	18111	6697	4320						
<i>Aphanocapsa elachista</i> v. <i>planctonica</i>	10720		12550	7757	3914	6209	132632	37228	95632	67925	28440	10374	10012	40246	29439	22518	7450
<i>Aphanothece clathrata</i>						P	17354		47607	16240	11227			79558		19890	19890
<i>Chlorogloea microcystoides</i>																	
<i>Chroococcus turgidus</i>	4445	2816	1307	2856	906												
<i>Coccolithus aeruginosa</i>								1859	1006	716	449						
<i>Coelosphaerium kuetzingianum</i>																	
<i>Dactylococcopsis linearis</i>						1129	2479			902	589	P		65842	P	16461	16461
<i>Desmonema wrangelii</i>	10720	25477	24352	20183	4743					11592	2898						
<i>Dichothrix gypsophila</i>	9936	150043	14049	58009	46032	30198	3984	18446	93976	36651	19846	81969	71513	319852	186708	165010	57796
<i>Gloethece linearis</i> v. <i>composita</i>		1743	2092	1278	647												
<i>Gomposphaeria lacustris</i>	75041	9118	P	28053	23641	P	62752	P	P	15688	15688		8939	19770	14679	10847	4239
<i>Lyngbya birgei</i>																	
<i>Lyngbya contorta</i>																	
<i>Microcoleus vaginatus</i>	P	P	P														
<i>Microcystis flos-aquae</i>	P																
<i>Nostoc commune</i>		P	P														
<i>Oncobrysa cesatii</i>																	
<i>Oscillatoria</i> sp.																	
<i>Oscillatoria limosa</i>																	
<i>Pseudanabaena</i> sp.																	
<i>Schizogonium murale</i>						29884	4958	P		8711	7154						
<i>Schizothrix calcicola</i>	106156	130734	97266	111385	10009	507996	459875	182115	582073	433015	87327	157136	192727	169458	138288	164402	11411
<i>Scopulonema minus</i>			P					19833	8720	1242	7449						
<i>Stigonema mariliosum</i>	3922	670	P	1531	1211	P											
Unidentified Cyanophyte akinete																	
Total Algal Density (No. cells/cm²)	302741	445045	301596	349794	47627	726950	1111331	515442	978311	833008	132499	375403	471541	795866	441105	520979	93799

^a P = present, but not encountered during routine cell counts; SE = standard error.

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	B6-7										D0-1							
	July 1997					July 1998					July 1997							
	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE
BACILLARIOPHYTA (Diatoms)																		
<i>Achnanthes detha</i>	679	1700	261		660	374						784	523	904			442	191
<i>Achnanthes flexella</i>	P	132	P	646	194	154	P	P	P			P			P	132	26	26
<i>Achnanthes lanceolata</i>																		
<i>Achnanthes minutissima</i>	14126	84454	64321	657448	205087	151510	2150	2295	498	1648	576	16669	8694		9478	17371	10442	3161
<i>Achnanthes minutissima</i> v. <i>cryptocephala</i>							P		P						P			
<i>Amphipleura</i> sp.																		
<i>Amphora</i> sp.								P										
<i>Amphora ovalis</i>			P				P						P	P	P	P		
<i>Amphora ovalis</i> v. <i>pediculus</i>																		
<i>Anomooneis</i> sp.				P														
<i>Anomooneis vitrea</i>																		
<i>Asterionella formosa</i>				P												P		
<i>Caloneis</i> sp.									P									
<i>Caloneis ventricosa</i>																		
<i>Caloneis ventricosa</i> v. <i>truncatula</i>																		
<i>Cocconeis diminuta</i>																		
<i>Cocconeis pediculus</i>																		
<i>Cocconeis placentula</i>																		
<i>Cocconeis placentula</i> v. <i>euglypta</i>																		
<i>Cocconeis</i> sp.																		
<i>Coscinodiscus denarius</i>																		
<i>Coscinodiscus lacustris</i>																		
<i>Cyclotella</i> sp.															144		29	29
<i>Cyclotella antiqua</i>	407	P	P	1162	392	274	526	P	498	341	171	143	P	P			29	29
<i>Cyclotella comta</i>	136		261		99	63												
<i>Cyclotella glomerata</i>				P			860	417	P	426	248							
<i>Cyclotella kutzingiana</i>				P			P											
<i>Cyclotella meneghiniana</i>																		
<i>Cyclotella ocellata</i>									145	48	48				P	132	26	26
<i>Cyclotella striata</i>															P			
<i>Cymbella affinis</i>							P	P	P									
<i>Cymbella amphioxys</i>	P		P									261					52	52
<i>Cymbella aspera</i>																		
<i>Cymbella cistula</i>																		
<i>Cymbella cuspidata</i>		P																
<i>Cymbella cymbiformis</i>		P		2324	581	581			P						P	P		
<i>Cymbella cymbiformis</i> v. <i>nonpunctata</i>			P									P		P				
<i>Cymbella gracilis</i>		P		1162	291	291		P	P									
<i>Cymbella lanceolata</i>																		
<i>Cymbella mexicana</i> v. <i>janischii</i>																		
<i>Cymbella minuta</i>	1358	1046	523	11818	3686	2716	430	P	P	143	143	3268	784	1023	442	1192	1342	498
<i>Cymbella naviculiformis</i>									P									
<i>Cymbella sinuata</i>																		
<i>Cymbella tumida</i>																		
<i>Cymbella turgida</i>	P		243	646	222	152						915	P	P	144		212	178
<i>Cymbella turgidula</i>	P		P															
<i>Cymbella</i> sp.	P	P	P	P								P	P	732		993	345	215
<i>Denticula tenuis</i>	P	1046	523	2324	973	498	143	P	166	103	52	P	P	P	295		59	59
<i>Diatoma elongatum</i>	7481	11157	26677	77424	30685	16125	573	522	789	628	82	2353	1307	1291	1326	3916	2039	511
<i>Diatoma vulgare</i>																		
<i>Didymosphenia geminata</i>		66		P	17	17						424	196	P	361	520	300	92
<i>Diploneis</i> sp.							P											
<i>Diploneis elliptica</i>																		
<i>Diploneis finnica</i>																		
<i>Diploneis interrupta</i>																		
<i>Diploneis ovalis</i>																		
<i>Epithemia sorex</i>	P	P	P	P			P	P	P			P	P	387	147	132	133	71
<i>Eunotia arcus</i>																		
<i>Eunotia exigua</i>																		
<i>Eunotia flexuosa</i>																		
<i>Eunotia glacialis</i>				P											P	265	53	53
<i>Eunotia major</i>																		
<i>Eunotia papilio</i>																		
<i>Eunotia praeurupta</i>	P		196	4846	1260	1196	P	P	166	55	55	P	P	678	289	353	264	126
<i>Eunotia praeurupta</i> v. <i>bidens</i>									P									
<i>Eunotia sudetica</i>																		
<i>Eunotia</i> sp.	P						P								P			
<i>Fragilaria brevistriata</i>																		
<i>Fragilaria construens</i>																		
<i>Fragilaria crotonensis</i>	P	P	P	4648	1162	1162	72	365	P	146	112	1046		646	P	629	464	204
<i>Fragilaria intermedia</i>																		
<i>Fragilaria pinnata</i>	P	523	P	2324	712	551	P		P			1046	1961	387	1326	132	970	328
<i>Frustulia vulgaris</i>																		
<i>Gomphonema</i> sp.								104		35	35					132	26	26
<i>Gomphonema acuminatum</i>				P												P		
<i>Gomphonema acuminatum</i> v. <i>coronata</i>														131			26	26
<i>Gomphonema angustatum</i>	P		P	5810	1453	1453	P	313	166	160	90	261	P	258	147	132	160	48
<i>Gomphonema constrictum</i>	P	P	P									P	P	P				
<i>Gomphonema gracile</i>							P		P									
<i>Gomphonema intricatum</i> v. <i>vibrio</i>																		
<i>Gomphonema olivaceum</i>																		
<i>Gomphonema parvulum</i>																		
<i>Gyrosigma</i> sp.																		
<i>Hantzschia amphioxys</i>																		
<i>Melosira</i> sp.							P											
<i>Melosira granulata</i>																		
<i>Meridion circulare</i>																		
<i>Navicula</i> sp.				1162	291	291	P											
<i>Navicula amphibola</i>				P								141	P	P	36	P	35	27
<i>Navicula anglica</i>																		
<i>Navicula aspera</i>																		
<i>Navicula bacillum</i>																		
<i>Navicula decussis</i>																		
<i>Navicula dolosa</i>																		
<i>Navicula capitata</i>																		
<i>Navicula cryptocephala</i>	P	784	261	2324	842	520	1003	452	168	541	245	915	131	129	3667	530		

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	B6-7										D0-1							
	July 1997					July 1998					July 1997							
	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE
<i>Navicula exigua</i>		P																
<i>Navicula exigua</i> v. <i>capitata</i>																		
<i>Navicula lacustris</i>							P											
<i>Navicula laevis</i>																		
<i>Navicula lanceolata</i>				23242	5810	5810	286	P		95	95			147	2034	436	400	
<i>Navicula mutica</i>				1162	291	291												
<i>Navicula placenta</i>																		
<i>Navicula pseudoscutiformis</i>																		
<i>Navicula pupula</i>				P			P	P	P					P	P			
<i>Navicula radiosa</i>	407	1311	605	4067	1598	846		104		35	35	1046	131	365	442	397	181	
<i>Navicula reinhardtii</i>																		
<i>Navicula rhychocephala</i>																		
<i>Navicula tripunctata</i>									332	111	111							
<i>Navicula tripunctata</i> v. <i>schizonemoides</i>																		
<i>Navicula viridula</i>				1078	270	270	P	139		46	46					115	23	23
<i>Nedium</i> sp.				P														
<i>Nedium bisulcatum</i>																		
<i>Nedium dubium</i>																		
<i>Nedium hitchcockii</i>																		
<i>Nedium iridis</i> v. <i>amphigomphus</i>																		
<i>Nitzschia</i> sp.																		
<i>Nitzschia acicularis</i>							P											
<i>Nitzschia amphibia</i>																		
<i>Nitzschia angustata</i>							P		P									
<i>Nitzschia dissipata</i>																		
<i>Nitzschia filiformis</i>	P	P	344	1162	377	274	143	P	P	48	48	261	507	P	P	232	200	95
<i>Nitzschia fonticola</i>							P	P	P									
<i>Nitzschia palea</i>		P	P															
<i>Nitzschia sigmoidea</i>	P		P									784	P		63	P	169	154
<i>Pinnularia</i> sp.				P								P	P					
<i>Pinnularia biceps</i>																		
<i>Pinnularia borealis</i>																		
<i>Pinnularia maior</i>																		
<i>Pinnularia mesolepta</i>									P									
<i>Pinnularia nodosa</i>																		
<i>Pinnularia streptoraphe</i>																		
<i>Pinnularia viridis</i>																		
<i>Rhizosolenia longiseta</i>																		
<i>Rhoicosphenia curvata</i>																		
<i>Rhopalodia gibba</i>												P			P	P		
<i>Rhopalodia gibba</i> v. <i>gebberula</i>																		
<i>Stauroneis anceps</i>				P			P		P			P			P			
<i>Stauroneis phoenicenteron</i>																		
<i>Stauroneis smithii</i>																		
<i>Stauroneis</i> sp.			P					P										
<i>Stephanodiscus astraea</i>	P		P	P												P		
<i>Surirella</i> sp.													P					
<i>Surirella angustata</i>																		
<i>Synedra actinostroides</i>	7188	12485	20766	9825	12566	2939	573	209	498	427	111	8235	3497	5930	6911	11100	7135	1258
<i>Synedra acus</i>	826	513	994	3103	1359	590			P									
<i>Synedra</i> sp.																		
<i>Synedra ulna</i>	119	P	252	P	93	60	72	P	145	72	42	P	114	420	180	285	200	72
<i>Tabellaria fenestrata</i>	68	229	P	4687	1246	1148	143	P	P	48	48	1569	P	2496	596	530	1038	444
<i>Tabellaria flocculosa</i>	136	761	1569	8393	2715	1915	430	P	996	475	288	4882	458	2421	1857	3608	2645	754
CRYPTOPHYTA (Cryptomonads)																		
<i>Cryptomonas curvata</i>																		
<i>Cryptomonas erosa</i>																		
<i>Cryptomonas ovata</i>									166	55	55							
<i>Cryptomonas reflexa</i>																		
<i>Katablepharis ovalis</i>																		
<i>Rhodomonas minuta</i>	136				34	34												
CHRYSOPHYTA (Golden-Brown Algae)																		
<i>Chrysiasterium catenatum</i>									3237	1079	1079							
<i>Chrysococcus</i> sp.																		
<i>Chrysoikos</i> sp.																		
<i>Chrysoisphaerella rodheii</i>																		
<i>Dinobryon crenulatum</i>							143			48	48							
<i>Dinobryon divergens</i>	P	132	523		164	124	5107	4995	5190	5097	56		P	P				
<i>Dinobryon sertularia</i>	407	262	P		167	101	9582	8841	8135	8853	418		P	P		132	26	26
<i>Dinobryon sertularia</i> v. <i>protuberans</i>			P	P			430	P	166	199	125			P				
<i>Dinobryon sociale</i>	P		P				3118	3416	1079	2538	734							
<i>Dinobryon tabellariae</i>			P	P														
<i>Ishtmochloron trispinatum</i>												P	131		72	P	41	27
<i>Kephyrion</i> sp.																		
<i>Kephyrion boreale</i>		P	P				860	209		356	259							
<i>Ochromonas</i> sp.				5810	1453	1453			332	111	111					295	59	59
<i>Ochromonas stellaris</i>															147		29	29
<i>Ophiocytium</i> sp.																		
<i>Pseudokephyrion</i> sp.																		
<i>Stichogloea doederleinii</i>				6973	1743	1743		1617		539	539					6156	1231	1231
<i>Synura</i> sp.																		
<i>Unidentified statospore</i>	P	P	261	P	65	65	P	104	166	90	48	1569	654	646	589	1125	917	190
PYRROPHYTA (Dinoflagellates)																		
<i>Glenodinium</i> sp.																		
<i>Gymnodinium</i> sp.							1147			382	382							
<i>Gymnodinium uberrimum</i>							P											
<i>Peridinium</i> sp.		P	P				P											
<i>Peridinium aciculiferum</i>	P	P	109	P	27	27	P	1147	664	604	332	261	654	P	589	P	301	140
<i>Peridinium cinctum</i>									P									
<i>Peridinium palatinum</i>																		
<i>Peridinium palustre</i>																		
<i>Peridinium willei</i>																		
<i>Unidentified cyst</i>							430			143	143	P	P	258	295	265	163	67
EUGLENOPHYTA																		
<i>Euglena</i> sp.																		
<i>Phacus</i> sp.																		
<i>Trachelomonas</i> sp.												P						

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	B6-7										D0-1							
	July 1997					July 1998					July 1997							
	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE
CHLOROPHYTA (Green Algae)																		
<i>Actinotaenium</i> sp.																		
<i>Ankistrodesmus convolutus</i>	136	523			165	124						784	131	387		861	433	171
<i>Ankistrodesmus falcatus</i>	136	523		1162	455	260	143		166	103	52		P		147	P	29	29
<i>Ankistrodesmus falcatus</i> v. <i>spiralis</i>	407	P	P	6973	1845	1712	P		166	55	55	2876	392	1098	1768	P	1227	511
<i>Ankistrodesmus gelifactus</i>	P		P									P						
<i>Arthrodesmus triangularis</i>							72			24	24	P						
<i>Binuclearia</i> sp.				P														
<i>Botryococcus</i> sp.							P											
<i>Bulbochaete</i> sp.	747	P	1598	5810	2039	1299	573	730	P	434	222	1767	784	690	737	16407	4077	3089
<i>Chlamydomonas</i> sp. a																		
<i>Chlamydomonas</i> sp. b																		
<i>Closterium</i> sp.				P											72		14	14
<i>Closterium acerosum</i>																		
<i>Closterium actum</i>																		
<i>Closterium diana</i>																		
<i>Closterium pseudolunula</i>																		
<i>Closterium rostratum</i>																		
<i>Coeloastrum</i> sp.													P					
<i>Coeloastrum cambricum</i>																		
<i>Coeloastrum microporum</i>	1630	2383		P	1003	599			1494	498	498				P	3177	635	635
<i>Coeloastrum printzii</i>							430			143	143							
<i>Coeloastrum sphaericum</i>				P				P				3922	P	P	4039	P	1592	975
<i>Cosmarium</i> sp.															147	132	56	34
<i>Cosmarium anceps</i>				P									P					
<i>Cosmarium biculatum</i>														129			26	26
<i>Cosmarium botrytis</i>	P	P		P									131	646			155	125
<i>Cosmarium capitulum</i> v. <i>groenlandicum</i>																		
<i>Cosmarium contracta</i>				P														
<i>Cosmarium coronatum</i>																		
<i>Cosmarium depressum</i>					9	9							P					
<i>Cosmarium granulatatum</i>	P	P	P	P			P		166	55	55	141		P	P	P	28	28
<i>Cosmarium holmiense</i> v. <i>intermedium</i>												196		P	P	P	39	39
<i>Cosmarium humile</i> v. <i>lacustre</i>	272	397	145	P	204	85	P		332	111	111	565	P	P	216	132	183	104
<i>Cosmarium impressulum</i> v. <i>suborthogonum</i>			P	P	24	24	P		P				P	P	147	P	29	29
<i>Cosmarium laeve</i>																		
<i>Cosmarium norimbergense</i>	P		P	2324	581	581			P				P	P	P		530	106
<i>Cosmarium phaseolus</i> v. <i>phaseolus</i>							P	P										
<i>Cosmarium pokornyanam</i>																		
<i>Cosmarium pseudoprotuberans</i>																		
<i>Cosmarium rectangulare</i>			P	P			P											
<i>Cosmarium rectangulum</i>				P														
<i>Cosmarium reniforme</i>																		
<i>Cosmarium repandum</i>																		
<i>Cosmarium septentrionale</i>				P			P	209	166	125	64				103	P	21	21
<i>Cosmarium speciosum</i>	136	132	316		146	65		P				1272	P	P	54		265	252
<i>Cosmarium subgranatum</i>																		
<i>Cosmarium tetraophthalmum</i>			P	P									P		P	P		
<i>Cosmarium turpinii</i>				P								406		P	144	P	110	79
<i>Cosmarium turpinii</i> v. <i>podolicum</i>																		
<i>Crucigenia apiculata</i>														P				
<i>Crucigenia quadrata</i>	543				136	136												
<i>Crucigenia rectangularis</i>	P	P											P		P	P		
<i>Cylindrocystis brebissonii</i>			P	145	36	36												
<i>Desmidium swartzii</i> v. <i>quadrangulatum</i>																		
<i>Dictyosphaerium pulchellum</i>																		
<i>Elakatothrix</i> sp.	407	1569	291	P	567	345	430	1043	166	546	260				147		29	29
<i>Euastropsis richteri</i>																		
<i>Euastrum</i> sp.																		
<i>Euastrum bidentatum</i>			P															
<i>Euastrum denticulatum</i>																		
<i>Euastrum dubium</i> v. <i>maius</i>	P	132	145	P	69	40	P	104	P	35	35	P		P	147	116	53	33
<i>Euastrum elegans</i>	543	P	145	P	172	128	P	P	P			141		P	P	P	28	28
<i>Euastrum gemmatum</i>																		
<i>Euastrum insulare</i> v. <i>silesiacum</i>																		
<i>Euastrum obesum</i>																		
<i>Euastrum ohioense</i>	P																	
<i>Euastrum sinosum</i>																		
<i>Euastrum verrucosum</i>									P									
<i>Gemmellicystis neglecta</i>																		
<i>Geminella interrupta</i>																		
<i>Gloeocystis schroeteri</i>	5569	3922	4183	2324	4000	665	717	626	330	558	117	15849	15557	8845	2431	5825	9701	2652
<i>Gloeoitila pelagica</i>																		
<i>Golenkinia radiata</i> v. <i>brevispina</i>			P															
<i>Gonatozygon brebissonii</i>				P			P											
<i>Gonatozygon monotaenium</i>																		
<i>Hyalotheca</i> sp.																		
<i>Kirchneriella</i> sp.												784	523	1162	884	1059	882	111
<i>Koliella longiseta</i>																		
<i>Lagerheimia subsalsa</i>																		
<i>Lagerheimia wratislaviensis</i>																		
<i>Microactinium pusillum</i>																		
<i>Monoraphidium</i> sp.																		
<i>Mougeotia</i> sp. a	543	P	363		227	136	P	287		96	96			P	P		13	13
<i>Nephrocystium limneticum</i>				P										131	P	P	26	26
<i>Oedogonium</i> sp.																		
<i>Oocystis elliptica</i>	P	437		P	109	109	287	5815		2034	1892	P	392		374	P	153	94
<i>Oocystis lacustris</i>	1494	8759	5491	12783	7132	2399	6164		664	2276	1953	8106	3922		5745	10062	5567	1737
<i>Oocystis solitaria</i>																		
<i>Oonophris obesa</i>				P				104	166	90	48							
<i>Quadrigula closterioides</i>																		
<i>Phacotus</i> sp.																		
<i>Pandorina morum</i>																		
<i>Pediastrum boryanum</i>	P			P								P		P	866	P	173	173
<i>Pediastrum boryanum</i> v. <i>ellesmerense</i>				P					1328	443	443	1046			P		209	209

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Species	D6-7						ML-MR												
	July 1997						July 1997						July 1998						
	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	
BACILLARIOPHYTA (Diatoms)																			
<i>Achnanthes detha</i>	522	697	4183	3972	2343	1003	2876	4183	1046	2702	910								
<i>Achnanthes flexella</i>	P	P	P	P			131	P	P	44	44	P	P	P	P	P			
<i>Achnanthes lanceolata</i>		P											P						
<i>Achnanthes minutissima</i>	15949	6484	53576	167585	60898	36988	51292	143546	61417	85418	29210	15817	26587	32724	147680	49867	54535	23931	
<i>Achnanthes minutissima</i> v. <i>cryptocephala</i>			697	P	174	174	523	523		349	174		P	1395	P	P	279	279	
<i>Amphipleura</i> sp.													P						
<i>Amphora</i> sp.													P						
<i>Amphora ovalis</i>	P	P	349	662	253	159			P				P	P	P				
<i>Amphora ovalis</i> v. <i>pediculus</i>														P					
<i>Anomoeoneis</i> sp.																			
<i>Anomoeoneis vitrea</i>			P	P									P	P	P	P			
<i>Asterionella formosa</i>								P					P		P	P			
<i>Caloneis</i> sp.				P									P		P	P			
<i>Caloneis ventricosa</i>																			
<i>Caloneis ventricosa</i> v. <i>truncatula</i>							261	P	697	319	203								
<i>Cocconeis diminuta</i>													P						
<i>Cocconeis pediculus</i>													P						
<i>Cocconeis placentula</i>																			
<i>Cocconeis placentula</i> v. <i>euglypta</i>													P						
<i>Cocconeis</i> sp.		P																	
<i>Coscinodiscus denarius</i>																			
<i>Coscinodiscus lacustris</i>																			
<i>Cyclotella</i> sp.	P	P																	P
<i>Cyclotella antiqua</i>		104	P	P	26	26							P	P	P	P			
<i>Cyclotella comta</i>				P			261	P	536	266	155		P	P	P				P
<i>Cyclotella glomerata</i>																			
<i>Cyclotella kutzingiana</i>													P						
<i>Cyclotella meneghiniana</i>																			
<i>Cyclotella ocellata</i>				662	165	165							P	P	P	P			P
<i>Cyclotella striata</i>	P	P		P					P				P	P					
<i>Cymbella affinis</i>													P	P		P			
<i>Cymbella amphioxys</i>		P							P										P
<i>Cymbella aspera</i>								P											P
<i>Cymbella cistula</i>																			P
<i>Cymbella cuspidata</i>			P										P	P		P			P
<i>Cymbella cymbiformis</i>				P															P
<i>Cymbella cymbiformis</i> v. <i>nonpunctata</i>	P	93	P		23	23	348	458	P	269	138								P
<i>Cymbella gracilis</i>				P									P	P		P			P
<i>Cymbella lanceolata</i>																			
<i>Cymbella mexicana</i> v. <i>janischii</i>																			
<i>Cymbella minuta</i>	1046	P	1743	3641	1607	767	1307	698	697	901	203	P	9711	2789	7308	P	3962	1962	
<i>Cymbella naviculiformis</i>													P	P		P			P
<i>Cymbella sinuata</i>																			
<i>Cymbella tumida</i>																			
<i>Cymbella turgida</i>		P	126	331	114	78	131	1046	3835	1671	1114		P	P	P				
<i>Cymbella turgidula</i>		P	P																
<i>Cymbella</i> sp.	523	P	378	P	225	133		P											P
<i>Denticula tenuis</i>	P	P	1046	658	426	258		261	P	87	87	P	1266	P			1339	521	319
<i>Diatoma elongatum</i>	96744	10215	48023	88072	60763	19912	6712	11635	9500	9282	1425	P	1266	P	19031	5020	5063	3611	
<i>Diatoma vulgare</i>																			
<i>Didymosphenia geminata</i>	134				34	34	P	P	P			P	P	P	P	P			
<i>Diploneis</i> sp.				P															P
<i>Diploneis elliptica</i>		139	P		35	35							P						
<i>Diploneis finnica</i>																			
<i>Diploneis interrupta</i>																			
<i>Diploneis ovalis</i>			P											P					
<i>Epithemia sorex</i>	P	41	63	662	191	157		P	349	116	116	P	P	P	P				
<i>Eunotia arcus</i>																			
<i>Eunotia exigua</i>																			
<i>Eunotia flexuosa</i>		P	P																
<i>Eunotia glacialis</i>				P				P	1961	1394	1118	583	P	P		P	669	134	134
<i>Eunotia major</i>								P					P						
<i>Eunotia papilio</i>																			
<i>Eunotia praerupta</i>	P	P	P	P									P	2532	1395	3654	1339	1784	616
<i>Eunotia praerupta</i> v. <i>bidens</i>								523	775	2883	1394	748		P			1339	268	268
<i>Eunotia sudetica</i>																			
<i>Eunotia</i> sp.															511			102	102
<i>Fragilaria brevistriata</i>																			
<i>Fragilaria construens</i>													P		P	P			
<i>Fragilaria crotonensis</i>	P	418	6275	2979	2418	1444	P	P					P		P	P			
<i>Fragilaria intermedia</i>																			
<i>Fragilaria pinnata</i>	P	837	697	3972	1376	884		P					2636	2532	4091	4872	P	2826	834
<i>Frustulia vulgaris</i>															P				
<i>Gomphonema</i> sp.																			
<i>Gomphonema acuminatum</i>				P															
<i>Gomphonema acuminatum</i> v. <i>coronata</i>																			P
<i>Gomphonema angustatum</i>	P	139	P	4415	1139	1093			697	232	232	2636	8862	P	P		2300	1718	
<i>Gomphonema constrictum</i>	P	P	P																
<i>Gomphonema gracile</i>				662	165	165								P	P	P			
<i>Gomphonema intricatum</i> v. <i>vibrio</i>																			
<i>Gomphonema olivaceum</i>													2636	P				527	527
<i>Gomphonema parvulum</i>																			
<i>Gyrosigma</i> sp.																			
<i>Hantzschia amphioxys</i>													P						
<i>Melosira</i> sp.																			
<i>Melosira granulata</i>															P	P			P
<i>Meridion circulare</i>																			
<i>Navicula</i> sp.																			
<i>Navicula amphibola</i>	P	P																	
<i>Navicula anglica</i>				P															
<i>Navicula aspera</i>																			
<i>Navicula bacillum</i>		P	P																
<i>Navicula decussis</i>																			
<i>Navicula dolosa</i>																			
<i>Navicula capitata</i>																			
<i>Navicula cryptocephala</i>	P	82	1743	P	456	429		P	P										
<i>Navicula cryptocephala</i> v. <i>intermedia</i>	P	697	697		349	201	1700	4881	8541	5041	1976	1318	P	P	1830	5346	1699	981	
<i>Navicula cuspidata</i>				P															

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	D6-7						ML-MR												
	July 1997						July 1997						July 1998						
	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	
CHLOROPHYTA (Green Algae)																			
<i>Actinotaenium</i> sp.																			
<i>Ankistrodesmus convolutus</i>																			
<i>Ankistrodesmus falcatus</i>				P	1986	496	496												
<i>Ankistrodesmus falcatus</i> v. <i>spiralis</i>	523	558	126	496	426	101													P
<i>Ankistrodesmus gelifactus</i>																			
<i>Arthrodesmus triangularis</i>									P										P
<i>Binuclearia</i> sp.																			
<i>Botryococcus</i> sp.																			
<i>Bulbochaete</i> sp.	8628	3730	5028	6578	5991	1054	490		P	163	163	3954	71317	15688	7022	36145	26825	12461	
<i>Chlamydomonas</i> sp. a																			
<i>Chlamydomonas</i> sp. b																			
<i>Closterium</i> sp.				P	P		114	P	P	38	38		633	P				127	127
<i>Closterium acerosum</i>																			
<i>Closterium actum</i>																			
<i>Closterium diana</i>																			
<i>Closterium pseudolunula</i>																			
<i>Closterium rostratum</i>																			
<i>Coeloastrum</i> sp.			P	P															
<i>Coeloastrum cambricum</i>																			
<i>Coeloastrum microporum</i>												3954		19523			4695	3785	
<i>Coeloastrum printzii</i>												1862	1266		1218	P	869	373	
<i>Coeloastrum sphaericum</i>	P	1116		P	279	279			P										
<i>Cosmarium</i> sp.																			
<i>Cosmarium anceps</i>							P	P	P			P	1266	P			253	253	
<i>Cosmarium biculatum</i>																			
<i>Cosmarium botrytis</i>	134				34	34	258	1475	578	455						6024	1205	1205	
<i>Cosmarium capitulum</i> v. <i>groenlandicum</i>																			
<i>Cosmarium contracta</i>	134		P		34	34			P	P									
<i>Cosmarium coronatum</i>																			
<i>Cosmarium depressum</i>	67		252		80	60			697	232	232								
<i>Cosmarium granulatum</i>		P	126	P	32	32	P	387	134	174	113	P	P	P					
<i>Cosmarium holmiense</i> v. <i>intermedium</i>							131	129	P	87	43		P	P			4518	904	904
<i>Cosmarium humile</i> v. <i>lacustre</i>							P	258		86	86	P			1218		244	244	
<i>Cosmarium impressulum</i> v. <i>suborthogonum</i>	P	P	P																
<i>Cosmarium laeve</i>			126	P	32	32													
<i>Cosmarium norimbergense</i>	P	P	P	P			P	261	402	221	118			P					
<i>Cosmarium phaseolus</i> v. <i>phaseolus</i>																			
<i>Cosmarium pokornyianum</i>																			
<i>Cosmarium pseudoprotuberans</i>																			
<i>Cosmarium rectangulare</i>	134				34	34	131	P	670	267	205	P	P	P		1339	268	268	
<i>Cosmarium rectangulum</i>												P	P	P					
<i>Cosmarium reniforme</i>																			
<i>Cosmarium repandum</i>																			
<i>Cosmarium septentrionale</i>				P								621	2532	1344	P	1004	1100	422	
<i>Cosmarium speciosum</i>		P	169	P	42	42	360	948	349	552	198	P	P	P		978	196	196	
<i>Cosmarium subgranatum</i>																			
<i>Cosmarium tetraophthalmum</i>		82			21	21	114	516	P	210	156		P						
<i>Cosmarium turpinii</i>	17	82	P	P	25	19	P	P	44	15	15	P		P		1339	268	268	
<i>Cosmarium turpinii</i> v. <i>podolicum</i>																			
<i>Crucigenia apiculata</i>																			
<i>Crucigenia quadrata</i>																			
<i>Crucigenia rectangularis</i>																			
<i>Cylindrocapsa brebissonii</i>	P								P	134	45	45		P	P	P	3681	736	736
<i>Desmidiium swartzii</i> v. <i>quadrangulatum</i>																			
<i>Dictyosphaerium pulchellum</i>																			
<i>Elakatothrix</i> sp.	784		P	P	196	196													
<i>Euastrum richteri</i>																			
<i>Euastrum</i> sp.																			
<i>Euastrum bidentatum</i>	P			P									P		P				
<i>Euastrum denticulatum</i>																			
<i>Euastrum dubium</i> v. <i>maius</i>	261	P	315	P	144	84			P	P						P	1004	201	201
<i>Euastrum elegans</i>			P	P					129	43	43	P	P	P					
<i>Euastrum gemmatum</i>		P		P															
<i>Euastrum insulare</i> v. <i>silesiacum</i>																			
<i>Euastrum obesum</i>																			
<i>Euastrum ohioense</i>																			
<i>Euastrum sinosum</i>																			
<i>Euastrum verrucosum</i>																			
<i>Gemmellicystis neglecta</i>																			
<i>Geminella interrupta</i>																			
<i>Gloeocystis schroeteri</i>	3399	3417	10807	7281	6226	1779	2092	4706	5926	4241	1131			8181		P	1636	1636	
<i>Gloeotila pelagica</i>																			
<i>Golenkinia radiata</i> v. <i>brevispina</i>								261		87	87								
<i>Gonatozygon brebissonii</i>																			
<i>Gonatozygon monotænium</i>	P		126		32	32													
<i>Hyalotheca</i> sp.																			
<i>Kirchneriella</i> sp.			697	662	340	196													
<i>Kollella longiseta</i>																			
<i>Lagerheimia subsalsa</i>																			
<i>Lagerheimia wratislaviensis</i>																			
<i>Microactinium pusillum</i>																			
<i>Monoraphidium</i> sp.																			
<i>Mougeotia</i> sp. a	1177	488	1229	2332	1306	381	1569	3099	27193	10620	8298		P	P					
<i>Nephrocytium limneticum</i>																			
<i>Ooedogonium</i> sp.												5587	10445				3206	2108	
<i>Oocystis elliptica</i>	P	P					P	784	1743	842	504								
<i>Oocystis lacustris</i>	1307	3207	3835	19196	6886	4138	2222	6275	7700	5399	1641	8568	2532	73211	53591	46855	36951	13565	
<i>Oocystis solitaria</i>																			
<i>Oonophris obesa</i>				P									P	4184		1339	1105	812	
<i>Quadrigula closterioides</i>																			
<i>Phacotus</i> sp.							523	915	2092	1177	471								
<i>Pandorina morum</i>																			
<i>Pediastrum boryanum</i>	P	P	349	P	87	87	P												
<i>Pediastrum boryanum</i> v. <i>ellesmerense</i>	P	P	P	P									P	P					
<i>Pediastrum duplex</i>																			
<i>Pediastrum duplex</i> v. <i>clathratum</i>																			
<i>Pediastrum integrum</i> v. <i>scutum</i>																			
<i>Pediastrum tetras</i>	P	1673			418	418													

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	D6-7						ML-MR												
	July 1997						July 1997						July 1998						
	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	
<i>Penium</i> sp.							P												
<i>Penium margaritaceum</i>																			
<i>Pleurotaenium</i> sp.																			
<i>Pleurotaenium trabecula</i>							P	131	P	44	44								
<i>Protoderma</i> sp.												P							
<i>Scenedesmus bijuga</i>	1046	558	697	P	575	217													
<i>Scenedesmus acuminatus</i>	261	418		5262	1485	1262	523			174	174								
<i>Scenedesmus arcuatus</i>																			
<i>Scenedesmus denticulatis</i>				P															
<i>Scenedesmus eornis</i>																			
<i>Scenedesmus incrassatulus</i>	P	558			140	140			P			5272	P				5355	2125	1302
<i>Scenedesmus obliquus</i>																			
<i>Scenedesmus quadricauda</i>	1046	1116	697	5296	2039	1090													
<i>Scenedesmus spinosus</i>																			
<i>Scenedesmus wisconsinensis</i>																			
<i>Spirogyra</i> sp.																			
<i>Staurastrum</i> sp. a																			
<i>Staurastrum</i> sp. b																			
<i>Staurastrum</i> sp. c																			
<i>Staurastrum anatinum</i> v. <i>biradiatum</i>																			
<i>Staurastrum antilopaeum</i>																			
<i>Staurastrum anatinum</i>																			
<i>Staurastrum apiculatum</i>																			
<i>Staurastrum borgeanum</i>	134			329	116	78			129	43	43								
<i>Staurastrum brebissonii</i>																			
<i>Staurastrum clevei</i>																			
<i>Staurastrum curvatum</i>																			
<i>Staurastrum cuspidatum</i>																			
<i>Staurastrum dejectum</i>	P	P	P	329	82	82													
<i>Staurastrum furcigerum</i>																			
<i>Staurastrum gliosum</i>																			
<i>Staurastrum hystrix</i>																			
<i>Staurastrum longibranchiatum</i>																			
<i>Staurastrum lunatum</i>																			
<i>Staurastrum manfeldtii</i>	P																		
<i>Staurastrum pachyrhynchum</i>	P						131	P	134	88	44								
<i>Staurastrum pilosum</i>	P						P												
<i>Staurastrum proboscidium</i>																			
<i>Staurastrum rhabdophorum</i>																			
<i>Staurastrum subcruciatum</i>																			
<i>Staurastrum tetracerum</i>	134	P	P		34	34													
<i>Staurastrum varians</i>																			
<i>Staurastrum triangularis</i>																			
<i>Stigeoclonium</i> sp.																			
<i>Teilingia granulata</i>	261		697	2302	815	516	261	522		261	151								
<i>Tetraedron tumidulum</i>																			
<i>Tetraedron limneticum</i>																			
<i>Tetraedron minimum</i>	261	139	349	P	187	76	261			87	87								
<i>Tetraedron muticum</i>																			
<i>Tetraedron arthrodesmiforme</i>																			
<i>Tetraedron caudatum</i>																			
<i>Tetraedron trigonum</i>																			
<i>Trochiscia granulata</i>																			
<i>Xanthidium antilopaeum</i>																			
<i>Xanthidium subhastiferum</i> v. <i>murrayi</i>																			
<i>Zygnema</i> sp.							775	536		437	229	P							
CYANOPHYTA (Cyanobacteria)																			
<i>Agmenellum quadruplicatum</i>																			
<i>Agmenellum thermale</i>							4183	1046	35560	1394	1394								
<i>Anabaena</i> sp.							1569			12725	11418	86288	866617	103286					
<i>Anabaena lapponica</i>							261			87	87	7449	P						
<i>Anabaena planctonica</i>																			
<i>Anacystis dimidiata</i>	P	82			21	21	P					19771	8862	20917	4872	652	11015	4028	
<i>Anacystis marina</i>																			
<i>Anacystis montana</i>																			
<i>Anacystis thermalis</i>	523	558	P	3289	1092	743													
<i>Aphanocapsa elachista</i>																			
<i>Aphanocapsa elachista</i> v. <i>planctonica</i>																			
<i>Aphanothece clathrata</i>																			
<i>Chlorogloea microcystoides</i>																			
<i>Chroococcus turgidus</i>	P	P	3138	662	950	746	1961	7060	2440	3820	1626								
<i>Coccochloris aeruginosa</i>																			
<i>Coelosphaerium kuetzingianum</i>	P																		
<i>Dactylococcopsis linearis</i>																			
<i>Desmonema wrangellii</i>	3889	418	8065		3093	1873	12289	79748	5229	32422	23751								
<i>Dichothrix gypsophila</i>	2092	7670	8065	4276	5526	1426	37913	56739	87505	60719	14454	P	164588	306790	24360	223566	143861	58440	
<i>Gloeothece linearis</i> v. <i>composite</i>																			
<i>Gomposphaeria lacustris</i>																			
<i>Lyngbya birgei</i>																			
<i>Lyngbya contorta</i>																			
<i>Microcoleus vaginatus</i>																			
<i>Microcystis flos-aquae</i>	13140	46018	47064	P	26556	11848	5622	P	19872	8498	5914								
<i>Nostoc commune</i>	6537	1647	2789	5296	4067	1122	30592	76887		35826	22349	2483	48110	926550	464050	38823	296003	178826	
<i>Oncobrysa cesatii</i>																			
<i>Oscillatoria</i> sp.																			
<i>Oscillatoria limosa</i>																			
<i>Pseudanabaena</i> sp.																			
<i>Schizogonium murale</i>																			
<i>Schizothrix calcicola</i>	65106	16455	151652	676509	227430	152281	412075	229831	165248	269051	73902	474512	1521802	4722518	1010924	1452510	1836453	745392	
<i>Scopulonema minus</i>																			
<i>Stigonema mamillosum</i>																			
Unidentified Cyanophyte akinete																			
Total Algal Density (No. cells/cm²)	247194	121199	391865	1136541	474200	227599	654334	708166	647025	669842	19278	1181392	4602757	9745430	2342572	4387544	4451939	1469589	

^a P = present, but not encountered during routine cell counts; SE = standard error.

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	ML-PL										MR-L						
	July 1997					July 1998					July 1998						
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE
BACILLARIOPHYTA (Diatoms)																	
<i>Achnanthes dotha</i>	523	2353		959	713												
<i>Achnanthes flexella</i>	P ^a		P							P					P		
<i>Achnanthes lanceolata</i>										P					P		
<i>Achnanthes minutissima</i>	13923	16626	36279	22276	7045	19121	16090	42559	25440	25803	5915	31446	44249	34514	19854	32516	5026
<i>Achnanthes minutissima</i> v. <i>cryptocephala</i>	P	261		87	87	2467	2682	16037		5297	3631	P	P	383	496	220	129
<i>Amphipleura</i> sp.														383		96	96
<i>Amphora</i> sp.																	
<i>Amphora ovalis</i>	P					P	P					P	P				
<i>Amphora ovalis</i> v. <i>pediculus</i>												P	P				
<i>Anomooneis</i> sp.																	
<i>Anomooneis vitrea</i>						P						P			P		
<i>Asterionella formosa</i>		P						1341		335	335						
<i>Caloneis</i> sp.												P	P				
<i>Caloneis ventricosa</i>						P			P								
<i>Caloneis ventricosa</i> v. <i>truncatula</i>			P														
<i>Cocconeis diminuta</i>												1155	P	P		289	289
<i>Cocconeis pediculus</i>																	
<i>Cocconeis placentula</i>	P																
<i>Cocconeis placentula</i> v. <i>euglypta</i>																	
<i>Cocconeis</i> sp.																	
<i>Coscinodiscus denarius</i>																	
<i>Coscinodiscus lacustris</i>																	
<i>Cyclotella</i> sp.																	
<i>Cyclotella antiqua</i>						2467	8045	1234		2937	1776	P	P	P	P		
<i>Cyclotella comta</i>	P	261	P	87	87	P	P					P	P	P	P		
<i>Cyclotella glomerata</i>						P											
<i>Cyclotella kutzingiana</i>												P	P	P	P		
<i>Cyclotella meneghiniana</i>																	
<i>Cyclotella ocellata</i>	P	P	P			P	P					P	P	383	496	220	129
<i>Cyclotella striata</i>						P						P	P	P	P		
<i>Cymbella affinis</i>												383	657	383		356	135
<i>Cymbella amphioxys</i>																	
<i>Cymbella aspera</i>																	
<i>Cymbella cistula</i>																469	117
<i>Cymbella cuspidata</i>	P					P										469	117
<i>Cymbella cymbiformis</i>																	
<i>Cymbella cymbiformis</i> v. <i>nonpunctata</i>	523	P	P	174	174												
<i>Cymbella gracilis</i>						P	P	P	P								
<i>Cymbella lanceolata</i>																	
<i>Cymbella mexicana</i> v. <i>janischii</i>																	
<i>Cymbella minuta</i>	261	523	P	261	151	4934	1341	2467	2827	2892	751	6903	3147	2301	993	3336	1269
<i>Cymbella naviculiformis</i>						P			2827	707	707	P	P	P	P		
<i>Cymbella sinuata</i>																	
<i>Cymbella tumida</i>																	
<i>Cymbella turgida</i>	550		P	183	183								P				
<i>Cymbella turgidula</i>																	
<i>Cymbella</i> sp.			P									383				96	96
<i>Denticula tenuis</i>			P			P	P		2120	530	530	P	P	P			
<i>Diatoma elongatum</i>	43145	120210	24186	62514	29363	2468	8152	4318	3463	4600	1243	3451	1573	383	1241	1662	647
<i>Diatoma vulgare</i>	P																
<i>Didymosphenia geminata</i>	P	P	P														
<i>Diploneis</i> sp.																	
<i>Diploneis elliptica</i>	P		P														
<i>Diploneis finnica</i>																	
<i>Diploneis interrupta</i>												P					
<i>Diploneis ovalis</i>			P										P	P			
<i>Epithemia sorex</i>	261		P	87	87	P	P	P	1413	353	353		P	P			
<i>Eunotia arcus</i>																	
<i>Eunotia exigua</i>																	
<i>Eunotia flexuosa</i>																	
<i>Eunotia glacialis</i>	P		P			P	1341	1234		644	372						
<i>Eunotia major</i>																	
<i>Eunotia papilio</i>																	
<i>Eunotia praerupta</i>	P	P	P									1155	P	P	P	289	289
<i>Eunotia praerupta</i> v. <i>bidens</i>																	
<i>Eunotia sudetica</i>																	
<i>Eunotia</i> sp.	P																
<i>Fragilaria brevistriata</i>																	
<i>Fragilaria construens</i>						P	P	P	2827	707	707		P	P	P		
<i>Fragilaria crotonensis</i>		784	P	261	261							P		P	P		
<i>Fragilaria intermedia</i>						P											
<i>Fragilaria pinnata</i>	523	1040	261	608	229	1234	6704	9869	11082	7222	2199	P	P	P	P		
<i>Frustulia vulgaris</i>		P	P									P					
<i>Gomphonema</i> sp.																	
<i>Gomphonema acuminatum</i>																	
<i>Gomphonema acuminatum</i> v. <i>coronata</i>																	
<i>Gomphonema angustatum</i>	P		131	44	44	P	P	1234		309	309	1155	P		P	289	289
<i>Gomphonema constrictum</i>	P	P	P														
<i>Gomphonema gracile</i>						P	P						4327	P	496	1206	1047
<i>Gomphonema intricatum</i> v. <i>vibrio</i>																	
<i>Gomphonema olivaceum</i>																	
<i>Gomphonema parvulum</i>								1234		309	309						
<i>Gyrosigma</i> sp.																	
<i>Hantzschia amphioxys</i>						P	P										
<i>Melosira</i> sp.						P											
<i>Melosira granulata</i>																	
<i>Meridion circulare</i>																	
<i>Navicula</i> sp.																	
<i>Navicula amphibola</i>																	
<i>Navicula anglica</i>						P											
<i>Navicula aspera</i>																	
<i>Navicula bacillum</i>						P						P	P	P	P		
<i>Navicula decussis</i>																	
<i>Navicula dolosa</i>																	
<i>Navicula capitata</i>																	
<i>Navicula cryptocephala</i>	261	784	261	435	174	1234	P	P	4240	1369	1000	P	393	P	P	98	98
<i>Navicula cryptocephala</i> v. <i>intermedia</i>																	
<i>Navicula cuspidata</i>																	

Appendix E2. Periphytic algal densities (no. cells/cm²) in streams of the Meliadine Study Area, 1997 and 1998

Species	ML-PL										MR-L							
	July 1997					July 1998					July 1998							
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	
<i>Navicula exigua</i>		P																
<i>Navicula exigua</i> v. <i>capitata</i>																		
<i>Navicula lacustris</i>						P						P	P			P		
<i>Navicula laevisima</i>																		
<i>Navicula lanceolata</i>								P	P					P		P		
<i>Navicula mutica</i>														P				
<i>Navicula placenta</i>																		
<i>Navicula pseudoscutiformis</i>														P		P		
<i>Navicula pupula</i>			P			P	P	P	P			P		P		P		
<i>Navicula radiosa</i>	261	574	131	322	131	3700	1341			1260	873		P	P				
<i>Navicula reinhardtii</i>	P											P						
<i>Navicula rhynchocephala</i>																		
<i>Navicula tripunctata</i>																		
<i>Navicula tripunctata</i> v. <i>schizonemoides</i>																		
<i>Navicula viridula</i>						1234	1341	P	1060	909	308	1151		P	P		288	288
<i>Nedium</i> sp.																		
<i>Nedium bisulcatum</i>															P			
<i>Nedium dubium</i>																		
<i>Nedium hitchcockii</i>														P				
<i>Nedium iridis</i> v. <i>amphigomphus</i>	P																	
<i>Nitzschia</i> sp.																		
<i>Nitzschia acicularis</i>																		
<i>Nitzschia amphibia</i>							P						P	P				
<i>Nitzschia angustata</i>							P					P	P	P				
<i>Nitzschia dissipata</i>																		
<i>Nitzschia filiformis</i>																		
<i>Nitzschia fonticola</i>		261	261	174	87	3392	4023	3701	6360	4369	676	P	P	383	P		96	96
<i>Nitzschia palea</i>	P																	
<i>Nitzschia sigmoidea</i>						P	427	P		107	107	P						
<i>Pinnularia</i> sp.																		
<i>Pinnularia biceps</i>													P					
<i>Pinnularia borealis</i>																		
<i>Pinnularia maior</i>																		
<i>Pinnularia mesolepta</i>						P	P	P				P	P	P				
<i>Pinnularia nodosa</i>	P																	
<i>Pinnularia streptoraphe</i>						P								P				
<i>Pinnularia viridis</i>																		
<i>Rhizosolenia longiseta</i>																		
<i>Rhizosolenia curvata</i>																		
<i>Rhopalodia gibba</i>	P		P			P	P	P	P			P	P	P				
<i>Rhopalodia gebberula</i>																		
<i>Stauroneis anceps</i>	P	P	P			P		P	P			P	P	P				
<i>Stauroneis phoenicenteron</i>																		
<i>Stauroneis smithii</i>																		
<i>Stauroneis</i> sp.																		
<i>Stephanodiscus astraea</i>			P			P	P	P	P			P	P	P	P			
<i>Surirella</i> sp.						P	P											
<i>Surirella angustata</i>												P	P	P				
<i>Synedra actinastroides</i>	1809	7059	3987	4285	1523	35059	18102	51206	11498	28966	8921	5656	2222	1917	P		2449	1177
<i>Synedra acus</i>												P	P	P				
<i>Synedra</i> sp.																		
<i>Synedra ulna</i>			P			P	P		P			288	P				72	72
<i>Tabellaria fenestrata</i>	392	185	261	279	60	5551	P	1234	1385	2043	1210	P	P	P				
<i>Tabellaria flocculosa</i>	2064	2307	981	1784	408	P	2682	3294	1413	1847	730	1155	1180	1965	P		1075	405
CRYPTOPHYTA (Cryptomonads)																		
<i>Cryptomonas curvata</i>																		
<i>Cryptomonas erosa</i>								1341		335	335							
<i>Cryptomonas ovata</i>																		
<i>Cryptomonas reflexa</i>																		
<i>Katablepharis ovalis</i>																		
<i>Rhodomonas minuta</i>												P						
CHRYSOPHYTA (Golden-Brown Algae)																		
<i>Chrysiasterum catenatum</i>																		
<i>Chrysococcus</i> sp.																		
<i>Chrysoikos</i> sp.																		
<i>Chrysoisphaerella rodheii</i>																		
<i>Dinobryon crenulatum</i>			131	44	44													
<i>Dinobryon divergens</i>	261	861	654	592	176	12336	2682	14396	9893	9827	2553							
<i>Dinobryon sertularia</i>	2092	784	523	1133	485		P		11306	2827	2827							
<i>Dinobryon sertularia</i> v. <i>protuberans</i>	5131	1307	523	2320	1423	17270	6034	16654	16494	14113	2698				234		59	59
<i>Dinobryon sociale</i>	4882	2615	1307	2935	1044	7402	15648	45643	4240	18233	9448		590				148	148
<i>Dinobryon tabellariae</i>			P			4934	9386	3392	2827	5135	1485							
<i>Ishmochlora trispinatum</i>	523	784	327	545	132	P	2682	P	2827	1377	796							
<i>Kephyrion</i> sp.																		
<i>Kephyrion boreale</i>		261		87	87		1341			335	335	P	393	383	P		194	112
<i>Ochromonas spa</i>								28373		7093	7093							
<i>Ochromonas stellaris</i>																		
<i>Ophiocytium</i> sp.	P		P			P	638			160	160							
<i>Pseudokephyrion</i> sp.																		
<i>Stichogloea doederleinii</i>	P	523	P	174	174							2301	6293	383			2244	1440
<i>Synura</i> sp.																		
<i>Unidentified statospore</i>	1569	3399	1569	2179	610	275400	206721	110407	124374	179226	38460				446		112	112
PYRROPHYTA (Dinoflagellates)																		
<i>Glenodinium</i> sp.																		
<i>Gymnodinium</i> sp.																		
<i>Gymnodinium uberrimum</i>										159	159							
<i>Peridinium</i> sp.	261	261	131	218	43	P	637	P				96	P				24	24
<i>Peridinium aciculiferum</i>		261	P	87	87	8691	1341	1234	3533	3700	1746		P	P	P			
<i>Peridinium cinctum</i>			P				P		5653	1413	1413							
<i>Peridinium palatinum</i>																		
<i>Peridinium palustre</i>																		
<i>Peridinium willei</i>																		
<i>Unidentified cyst</i>	523	P	P	174	174	925	P			231	231			383	234		154	94
EUGLENOPHYTA																		
<i>Euglena</i> sp.																		
<i>Phacus</i> sp.																		
<i>Trachelomonas</i> sp.	P	P	P			407				102	102	383	P				96	96

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Species	ML-PL										MR-L						
	July 1997					July 1998					July 1998						
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE
CHLOROPHYTA (Green Algae)																	
<i>Actinotaenium</i> sp.																	
<i>Ankistrodesmus convolutus</i>																	
<i>Ankistrodesmus falcatulus</i>																	
<i>Ankistrodesmus falcatulus</i> v. <i>spiralis</i>								P	1413	353	353	P	P	P	1489	471	352
<i>Ankistrodesmus gelifactus</i>																	
<i>Arthrodesmus triangularis</i>		P	P			P	P	P							P		
<i>Binuclearia</i> sp.									P						3046	761	761
<i>Botryococcus</i> sp.														P			
<i>Bulbochaete</i> sp.	P	523	P	174	174	P	2551	P	5653	2051	1343	P	P		P		
<i>Chlamydomonas</i> sp. a																	
<i>Chlamydomonas</i> sp. b																	
<i>Closterium</i> sp.		123	P	41	41			P									
<i>Closterium acerosum</i>																	
<i>Closterium actum</i>																	
<i>Closterium diana</i>																	
<i>Closterium pseudolunula</i>																	
<i>Closterium rostratum</i>																	
<i>Coelastrum</i> sp.						P											
<i>Coelastrum canaliculatum</i>																	
<i>Coelastrum microporum</i>						P											
<i>Coelastrum printzii</i>	P		P			6168	1341	1234	6926	3917	1526			P			
<i>Coelastrum sphaericum</i>																	
<i>Cosmarium</i> sp.						1234		1234		617	356						
<i>Cosmarium anceps</i>	P													P			
<i>Cosmarium biculatum</i>																	
<i>Cosmarium botrytis</i>																	
<i>Cosmarium capitulum</i> v. <i>groenlandicum</i>								1234		309	309						
<i>Cosmarium contracta</i>																	
<i>Cosmarium coronatum</i>		P															
<i>Cosmarium depressum</i>	261		131	131	75												
<i>Cosmarium granulatum</i>	P	P	P			P		P	P			P	P		P		
<i>Cosmarium holmiense</i> v. <i>intermedium</i>	P						P						P	P			
<i>Cosmarium humile</i> v. <i>lacustre</i>			P			P		P	P			P	P	P			
<i>Cosmarium impressulum</i> v. <i>suborthogonum</i>	P	P				P		P	519	130	130			P		234	59
<i>Cosmarium laeve</i>									P								
<i>Cosmarium norimbergense</i>						P	1341	P	P	335	335	P		P			
<i>Cosmarium phaseolus</i> v. <i>phaseolus</i>									P			P	P				
<i>Cosmarium pokornyanum</i>																	
<i>Cosmarium pseudoprotuberans</i>																	
<i>Cosmarium rectangulare</i>	P	P	P			P	529	P		132	132					P	
<i>Cosmarium rectangulum</i>						P	P	P									
<i>Cosmarium reniforme</i>																	
<i>Cosmarium repandum</i>																	
<i>Cosmarium septentrionale</i>						1234	638	952	693	879	137	767	P	P	P	192	192
<i>Cosmarium speciosum</i>	261	261	392	305	44	P	P		693	173	173	P			372	93	93
<i>Cosmarium subgranatum</i>																	
<i>Cosmarium tetraophthalmum</i>	P	P						P									
<i>Cosmarium turpinii</i>	103	P	98	67	34	2467		P	1413	970	600			P			
<i>Cosmarium turpinii</i> v. <i>podolicum</i>			P														
<i>Crucigenia apiculata</i>																	
<i>Crucigenia quadrata</i>																	
<i>Crucigenia rectangularis</i>																	
<i>Cylindrocapsa brevissonii</i>	261		P	87	87	P	P		1905	476	476	3835	590	1150	469	1511	789
<i>Desmidiium swartzii</i> v. <i>quadrangulatum</i>																	
<i>Dictyosphaerium pulchellum</i>																	
<i>Elakathrix</i> sp.		261		87	87	P									P		
<i>Euastropsis richteri</i>																	
<i>Euastrum</i> sp.			P														
<i>Euastrum bidentatum</i>						P	P	1234		309	309			P			
<i>Euastrum denticulatum</i>																	
<i>Euastrum dubium</i> v. <i>maius</i>	P	P				P		P	1413	353	353		P	P	P		
<i>Euastrum elegans</i>	P	P	P			P	P	1234	P	309	309		P	288		72	72
<i>Euastrum gemmatum</i>	P																
<i>Euastrum insulare</i> v. <i>silesiacum</i>																	
<i>Euastrum obesum</i>																	
<i>Euastrum ohioense</i>																	
<i>Euastrum sinosum</i>																	
<i>Euastrum verrucosum</i>																	
<i>Gemmellicystis neglecta</i>																	
<i>Geminella interrupta</i>																	
<i>Gloeocystis schroeteri</i>	17780	10459	5577	11272	3546	19738	5363	24672		12443	5829						
<i>Gloeotila pelagica</i>																	
<i>Golenkinia radiata</i> v. <i>brevispina</i>																	
<i>Gonatozygon brevissonii</i>																	
<i>Gonatozygon monotaenium</i>								P	P								
<i>Hyalotheca</i> sp.								P									
<i>Kirchneriella</i> sp.																	
<i>Koliella longiseta</i>																	
<i>Lagerheimia subsalsa</i>																	
<i>Lagerheimia wratislawiensis</i>																	
<i>Micractinium pusillum</i>																	
<i>Monoraphidium</i> sp.																	
<i>Mougeotia</i> sp. a			131	44	44		P	P	P								
<i>Nephrocium limneticum</i>																	
<i>Oedogonium</i> sp.																	
<i>Oocystis elliptica</i>	261		437	233	127				1413	353	353						
<i>Oocystis lacustris</i>	3399	5491	1046	3312	1284	53661	2682	1234	46881	26114	14018	1917	6883	1150	9727	4919	2045
<i>Oocystis solitaria</i>								P									
<i>Oonophris obesa</i>									2827	707	707			3147		787	787
<i>Quadrigula closterioides</i>																	
<i>Phacotus</i> sp.		261	523	261	151												
<i>Pandorina morum</i>			2353	784	784												
<i>Pediastrum boryanum</i>		P	P														
<i>Pediastrum boryanum</i> v. <i>ellesmerense</i>																	
<i>Pediastrum duplex</i>																	
<i>Pediastrum duplex</i> v. <i>clathratum</i>																	
<i>Pediastrum integrum</i> v. <i>scutum</i>																	
<i>Pediastrum tetras</i>												P		P			

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Species	ML-PL										MR-L						
	July 1997					July 1998					July 1998						
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE
<i>Penium</i> sp.						2467	1913				1095	642					
<i>Penium margaritaceum</i>																	
<i>Pleurotaenium</i> sp.																	
<i>Pleurotaenium trabecula</i>	P	P	P														
<i>Protoderma</i> sp.													2684	46805	4602		13523
<i>Scenedesmus bijuga</i>								2467			617	617	P		767		192
<i>Scenedesmus acuminatus</i>						P								P			
<i>Scenedesmus arcuatus</i>																	
<i>Scenedesmus denticulatis</i>																	
<i>Scenedesmus ecornis</i>																	
<i>Scenedesmus incrassatulus</i>						2467			P		617	617	1534	P	P	P	384
<i>Scenedesmus obliquus</i>																	
<i>Scenedesmus quadricauda</i>	P					2467	5363	1234	P		2266	1149			P	P	
<i>Scenedesmus spinosus</i>																	
<i>Scenedesmus wisconsinensis</i>																	
<i>Spirogyra</i> sp.																	
<i>Staurastrum</i> sp. a		P	P														
<i>Staurastrum</i> sp. b						P		2467	P		617	617	307	P	P	P	77
<i>Staurastrum</i> sp. c																	
<i>Staurastrum anatinum</i> v. <i>biradiatum</i>																	
<i>Staurastrum antilopaeum</i>																	
<i>Staurastrum anatinum</i>																	
<i>Staurastrum apiculatum</i>																	
<i>Staurastrum borgeanum</i>	P	P	P											P			
<i>Staurastrum brebissonii</i>						P			P								
<i>Staurastrum clevei</i>																	
<i>Staurastrum curvatum</i>																	
<i>Staurastrum cuspidatum</i>																	
<i>Staurastrum dejectum</i>			P			P		P	P								
<i>Staurastrum furcigerum</i>		P															
<i>Staurastrum gladiusum</i>																	
<i>Staurastrum hystrix</i>																	
<i>Staurastrum longibranchiatum</i>																	
<i>Staurastrum lunatum</i>																	
<i>Staurastrum manfeldtii</i>																	
<i>Staurastrum pachyrhynchum</i>	P	P	P														
<i>Staurastrum pilosum</i>	P	P	P														
<i>Staurastrum proboscidium</i>																	
<i>Staurastrum rhabdophorum</i>																	
<i>Staurastrum subcruciatum</i>	P		P														
<i>Staurastrum tetracerum</i>						P											
<i>Staurastrum varians</i>						P	P										
<i>Staurodesmus triangularis</i>																	
<i>Stigeoclonium</i> sp.																	
<i>Teilingia granulata</i>	523	1046	523	697	174	2467	1341	1234			1261	504	383	1180	1917	703	1046
<i>Tetraedron tumidulum</i>	P																
<i>Tetraedron limneticum</i>																	
<i>Tetraedron minimum</i>						P							P	P			
<i>Tetraedron muticum</i>														P	P		
<i>Tetraedron arthrodesmiforme</i>																	
<i>Tetraedron caudatum</i>													P				
<i>Tetraedron trigonum</i>						P	P	P									
<i>Trochiscia granulata</i>						P	P										
<i>Xanthidium antilopaeum</i>																	
<i>Xanthidium subhastiferum</i> v. <i>murrayi</i>																	
<i>Zygnema</i> sp.	4197	3035		2411	1251	P	P	P									
CYANOPHYTA (Cyanobacteria)																	
<i>Agmenellum quadruplicatum</i>																	
<i>Agmenellum thermale</i>	P						P	P					23393		35281	28788	8820
<i>Anabaena</i> sp.							112633		453683	141579	107369			6903			14771
<i>Anabaena lapponica</i>	17780	2615		6798	5542												
<i>Anabaena planctonica</i>																	
<i>Anacystis dimidiata</i>	P		P			32690	12068	4934	P	12423	7195		P	P			
<i>Anacystis marina</i>						193674				48419	48419						
<i>Anacystis montana</i>																	
<i>Anacystis thermalis</i>	3303		1046	1450	975	45643	17856		P	15875	10778			P		993	248
<i>Aphanocapsa elachista</i>										29499	29499			7866			1967
<i>Aphanocapsa elachista</i> v. <i>planctonica</i>	P							62913	149814	53182	35460		1534	47985	2684	33752	21489
<i>Aphanothece clathrata</i>								335538		83885	83885						
<i>Chlorogloea microcystoides</i>																	
<i>Chroococcus turgidus</i>	1046	10307	3007	4787	2818												
<i>Coccochloris aeruginosa</i>																	
<i>Coelosphaerium kuetzingianum</i>																	
<i>Dactylococcopsis linearis</i>						4934				1234	1234						
<i>Desmonema wrangelii</i>	24055	44973	76480	48503	15236												
<i>Dichothrix gypsophila</i>	16734		10197	8977	4869	18504	175653	14803	237442	111600	56255		22242	71978	P	20616	28709
<i>Gloeothecae linearis</i> v. <i>composite</i>	1307		P	436	436												
<i>Gomphosphaeria lacustris</i>		20656	11505	10720	5976								P	40905	9204	P	12527
<i>Lyngbya birgei</i>																	
<i>Lyngbya contorta</i>																	
<i>Microcoleus vaginatus</i>	26408	44188	22617	31071	6649	24672				6168	6168						
<i>Microcystis flos-aquae</i>	P	784	4183	1656	1284	P	P										
<i>Nostoc commune</i>	P	6275	29938	12071	9115	307165	238674	64147	P	152497	72117		7670	22419	P	18861	12238
<i>Oncobrysa cesatii</i>																	
<i>Oscillatoria</i> sp.																	
<i>Oscillatoria limosa</i>																	
<i>Pseudanabaena</i> sp.																	
<i>Schizogonium murale</i>						P	P	P									
<i>Schizothrix calcicola</i>	318469	200023	236629	251707	35014	774698	299013	864750	1171662	777531	180724		461335	584081	287999	490887	456076
<i>Scopulonema minus</i>		3937		1312	1312	86352	50953	11102		37102	19727						
<i>Stigonema mammosum</i>	P	P	3399	1133	1133	1160813	163258	2945826		1067474	676635						
Unidentified Cyanophyte akinete																	
Total Algal Density (No. cells/cm²)	515886	519502	482116	505835	11905	3153741	1533229	4704163	2344867	2934000	676449	584662	899256	396089	635365	628843	103800

^a P = present, but not encountered during routine cell counts; SE = standard error.

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	Meliadine Lake East Basin (ML-E)											Meliadine Lake South Basin (ML-S)							
	July 1997						July 1998					July 1997							
	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	
BACILLARIOPHYTA (Diatoms)																			
<i>Achnanthes oetha</i>	139	275	2092		627	492						32					6	6	
<i>Achnanthes flexella</i>	P ^a	P		P			P	P	P			P	P	P	P	P			
<i>Achnanthes lanceolata</i>	P	P	P					P				P		P	P				
<i>Achnanthes minutissima</i>	15897	15322	29808	4467	16373	5193	959	1497	1203	1220	156	953	240	119	34022	51945	17456	10801	
<i>Achnanthes minutissima v. cryptocephala</i>			698		175	175													
<i>Amphipleura</i> sp.																			
<i>Amphora</i> sp.																			
<i>Amphora ovalis</i>	P	P	P	145	36	36	P	P	201	67	67	P			P	P			
<i>Amphora ovalis v. pediculus</i>								P											
<i>Anomoeoneis</i> sp.																			
<i>Anomoeoneis vitrea</i>															P	P			
<i>Asterionella formosa</i>																			
<i>Caloneis</i> sp.				P			P	P											
<i>Caloneis ventricosa</i>	P														P				
<i>Caloneis ventricosa v. truncatula</i>			P												P				
<i>Cocconeis diminuta</i>							P												
<i>Cocconeis pediculus</i>																			
<i>Cocconeis placentula</i>															P				
<i>Cocconeis placentula v. euglypta</i>																			
<i>Cocconeis</i> sp.																			
<i>Coccinodiscus denarius</i>																	P		
<i>Coccinodiscus lacustris</i>																			
<i>Cyclotella</i> sp.												P		P					
<i>Cyclotella antiqua</i>			P									P	P	P					
<i>Cyclotella comta</i>	139	241	P		95	59											P	P	
<i>Cyclotella glomerata</i>																	P	P	
<i>Cyclotella kutzingiana</i>																	P	P	
<i>Cyclotella meneghiniana</i>			P				P												
<i>Cyclotella ocellata</i>							P	P	P								P		
<i>Cyclotella striata</i>			P		P		575	P	P	192	192				63	P	13	13	
<i>Cymbella affinis</i>								155	P	52	52								
<i>Cymbella amphioxys</i>			P																
<i>Cymbella aspera</i>															P				
<i>Cymbella cistula</i>																	P		
<i>Cymbella cuspidata</i>	P	P					P		P								P		
<i>Cymbella cymbiformis</i>	P	P	P	145	36	36		P									P		
<i>Cymbella cymbiformis v. nonpunctata</i>	139	69	437		161	96						P	P						
<i>Cymbella gracilis</i>															83	P	17	17	
<i>Cymbella lanceolata</i>																			
<i>Cymbella mexicana v. janischii</i>																			
<i>Cymbella minuta</i>	P	1170	1046	109	581	306	192	260	P	151	78	P	P	11	567	1162	348	231	
<i>Cymbella naviculiformis</i>				P			P	P								P			
<i>Cymbella sinuata</i>			P																
<i>Cymbella tumida</i>																			
<i>Cymbella turgida</i>	139	P	P		35	35									P	465	93	93	
<i>Cymbella turgidula</i>							P												
<i>Cymbella</i> sp.	P	413	P	P	103	103									P	P			
<i>Denticula tenuis</i>		P	P						P			16	P	P	126	P	28	25	
<i>Diatoma elongatum</i>	9966	15602	13249	11476	12573	1212	4044	1757	3134	2978	665	544	227	257	378	697	421	89	
<i>Diatoma vulgare</i>																			
<i>Didymosphenia geminata</i>																			
<i>Diplooneis</i> sp.				P			P	195	150	115	59				P	P			
<i>Diplooneis elliptica</i>			P					P											
<i>Diplooneis finnica</i>																	P		
<i>Diplooneis interrupta</i>																			
<i>Diplooneis ovalis</i>								P							P				
<i>Ephithemia sorex</i>	1238	619	558	P	604	253	P	P	P			64	53	P	1929	2816	972	589	
<i>Eunotia arcus</i>																			
<i>Eunotia exigua</i>																			
<i>Eunotia flexuosa</i>																			
<i>Eunotia glacialis</i>															P	P			
<i>Eunotia maior</i>																			
<i>Eunotia papilio</i>																			
<i>Eunotia praeurupta</i>	P	P	P	46	12	12	P	P	P			P		P	504	465	194	119	
<i>Eunotia praeurupta v. bidens</i>																			
<i>Eunotia sudetica</i>																			
<i>Eunotia</i> sp.	P		523		131	131													
<i>Fragilaria brevistriata</i>									P										
<i>Fragilaria construens</i>				P					P										
<i>Fragilaria crotonensis</i>			P	P								64					13	13	
<i>Fragilaria intermedia</i>																			
<i>Fragilaria pinnata</i>	1116	688	P	184	497	252	P	P	P					23	P	P	5	5	
<i>Frustulia vulgaris</i>		P	P	P															
<i>Gomphonema</i> sp.																			
<i>Gomphonema acuminatum</i>				35	9	9											P		
<i>Gomphonema acuminatum v. coronata</i>			P																
<i>Gomphonema angustatum</i>		550	P	436	246	144		P	P				P		42	116	32	23	
<i>Gomphonema constrictum</i>	P		P									P		P					
<i>Gomphonema gracile</i>															P	P			
<i>Gomphonema intricatum v. vibrio</i>																			
<i>Gomphonema olivaceum</i>							P		P										
<i>Gomphonema parvulum</i>	P		P				384	P		128	128				P				
<i>Gyrosigma</i> sp.																			
<i>Hantzschia amphioxys</i>							P	P	P										
<i>Melosira</i> sp.								P											
<i>Melosira granulata</i>																			
<i>Meridion circulare</i>																			
<i>Navicula</i> sp.	P		P																
<i>Navicula amphibola</i>																			
<i>Navicula anglica</i>							P	P	P										
<i>Navicula aspera</i>																			
<i>Navicula bacillum</i>																			
<i>Navicula decussis</i>																			
<i>Navicula dolosa</i>																			
<i>Navicula capitata</i>																			
<i>Navicula cryptocephala</i>	35	P		P	9	9	P	P							2252	619	574	436	
<i>Navicula cryptocephala v. intermedia</i>	1174	1056	523	436	797	186						32	P	54		4475	912	891	
<i>Navicula cuspidata</i>																			

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	Meliadine Lake East Basin (ML-E)										Meliadine Lake South Basin (ML-S)									
	July 1997					July 1998					July 1997									
	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE		
CHLOROPHYTA (Green Algae)																				
<i>Actinotaenium</i> sp.																				
<i>Ankistrodesmus convolutus</i>																				
<i>Ankistrodesmus falcatus</i>																				
<i>Ankistrodesmus falcatus</i> v. <i>spiralis</i>			P						P					P						
<i>Ankistrodesmus gelifactus</i>																				
<i>Arthrodesmus triangularis</i>									P	P			P	P	P					
<i>Binuclearia</i> sp.									959	P		320	320							
<i>Botryococcus</i> sp.																				
<i>Bulbochaete</i> sp.	1255	3165		P	369	1197	707		P	P	2006	669	669	381	160		42	465	210	92
<i>Chlamydomonas</i> sp. a																				
<i>Chlamydomonas</i> sp. b																				
<i>Closterium</i> sp.																				
<i>Closterium acerosum</i>																				
<i>Closterium actum</i>																				
<i>Closterium diana</i>																				
<i>Closterium pseudolunula</i>																				
<i>Closterium rostratum</i>																				
<i>Coelastrum</i> sp.																				
<i>Coelastrum cambricum</i>																				
<i>Coelastrum microporum</i>																				
<i>Coelastrum printzii</i>																				
<i>Coelastrum sphaericum</i>																				
<i>Cosmarium</i> sp.																				
<i>Cosmarium anceps</i>																				
<i>Cosmarium biculatum</i>																				
<i>Cosmarium botrytis</i>																				
<i>Cosmarium capitulum</i> v. <i>groenlandicum</i>																				
<i>Cosmarium contracta</i>																				
<i>Cosmarium coronatum</i>																				
<i>Cosmarium depressum</i>																				
<i>Cosmarium granulatum</i>																				
<i>Cosmarium holmiense</i> v. <i>intermedium</i>																				
<i>Cosmarium humile</i> v. <i>lacustre</i>																				
<i>Cosmarium impressulum</i> v. <i>suborthogonum</i>																				
<i>Cosmarium laeve</i>																				
<i>Cosmarium norimbergense</i>																				
<i>Cosmarium phaseolus</i> v. <i>phaseolus</i>																				
<i>Cosmarium pokornyianum</i>																				
<i>Cosmarium pseudoprotuberans</i>																				
<i>Cosmarium rectangulare</i>																				
<i>Cosmarium rectangulum</i>																				
<i>Cosmarium reniforme</i>																				
<i>Cosmarium repandum</i>																				
<i>Cosmarium septentrionale</i>																				
<i>Cosmarium speciosum</i>																				
<i>Cosmarium subgranatum</i>																				
<i>Cosmarium tetraophthalmum</i>																				
<i>Cosmarium turpinii</i>																				
<i>Cosmarium turpinii</i> v. <i>podolicum</i>																				
<i>Crucigenia apiculata</i>																				
<i>Crucigenia quadrata</i>																				
<i>Crucigenia rectangularis</i>																				
<i>Cylindrocapsa brebissonii</i>																				
<i>Desmidiium swartzii</i> v. <i>quadrangulatum</i>																				
<i>Dictyosphaerium pulchellum</i>																				
<i>Elakatothrix</i> sp.																				
<i>Euastropsis richteri</i>																				
<i>Euastrum</i> sp.																				
<i>Euastrum bidentatum</i>																				
<i>Euastrum denticulatum</i>																				
<i>Euastrum dubium</i> v. <i>maius</i>																				
<i>Euastrum elegans</i>																				
<i>Euastrum gemmatum</i>																				
<i>Euastrum insulare</i> v. <i>silesiacum</i>																				
<i>Euastrum obesum</i>																				
<i>Euastrum ohioense</i>																				
<i>Euastrum sinosum</i>																				
<i>Euastrum verrucosum</i>																				
<i>Gemmelicystis neglecta</i>																				
<i>Geminella interrupta</i>																				
<i>Gloeocystis schroeteri</i>																				
<i>Gloeotila pelagica</i>																				
<i>Golenkinia radiata</i> v. <i>brevispina</i>																				
<i>Gonatozygon brebissonii</i>																				
<i>Gonatozygon monotaenium</i>																				
<i>Hyalotheca</i> sp.																				
<i>Kirchneriella</i> sp.																				
<i>Koliella longiseta</i>																				
<i>Lagerheimia subsalsa</i>																				
<i>Lagerheimia wratislawiensis</i>																				
<i>Micractinium pusillum</i>																				
<i>Monoraphidium</i> sp.																				
<i>Mougeotia</i> sp. a																				
<i>Nephrocitium limneticum</i>																				
<i>Oeodogonium</i> sp.																				
<i>Oocystis elliptica</i>																				
<i>Oocystis lacustris</i>																				
<i>Oocystis solitaria</i>																				
<i>Oonephris obesa</i>																				
<i>Quadrigula closterioides</i>																				
<i>Phacotus</i> sp.																				
<i>Pandorina morum</i>																				
<i>Pediastrum boryanum</i>																				
<i>Pediastrum boryanum</i> v. <i>ellesmerense</i>																				
<i>Pediastrum duplex</i>																				
<i>Pediastrum duplex</i> v. <i>clathratum</i>																				
<i>Pediastrum integrum</i> v. <i>scutum</i>																				
<i>Pediastrum tetras</i>																				

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	Meliadine Lake East Basin (ML-E)										Meliadine Lake South Basin (ML-S)								
	July 1997					July 1998					July 1997								
	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	
<i>Penium</i> sp.								P											
<i>Penium margaritaceum</i>																			
<i>Pleurotaenium</i> sp.																			
<i>Pleurotaenium trabecula</i>																			
<i>Protoderma</i> sp.							3068	2733	7622	4474	1577								
<i>Scenedesmus bijuga</i>																P			
<i>Scenedesmus acuminatus</i>																			
<i>Scenedesmus arcuatus</i>																			
<i>Scenedesmus denticulatus</i>														167			33	33	
<i>Scenedesmus ecornis</i>																			
<i>Scenedesmus incrassatulus</i>				P					P										
<i>Scenedesmus obliquus</i>																			
<i>Scenedesmus quadricauda</i>				P												813	163	163	
<i>Scenedesmus spinosus</i>																			
<i>Scenedesmus wisconsinensis</i>																			
<i>Spirogyra</i> sp.																P			
<i>Staurastrum</i> sp. a		P											P	27			5	5	
<i>Staurastrum</i> sp. b				P															
<i>Staurastrum</i> sp. c																			
<i>Staurastrum anatinum</i> v. <i>biradiatum</i>																			
<i>Staurastrum antilopaeum</i>																			
<i>Staurastrum anatinum</i>																			
<i>Staurastrum apiculatum</i>																			
<i>Staurastrum borgeanum</i>																			
<i>Staurastrum brebissonii</i>															P	203	41	41	
<i>Staurastrum clevei</i>																			
<i>Staurastrum curvatum</i>																			
<i>Staurastrum cuspidatum</i>																			
<i>Staurastrum dejectum</i>																			
<i>Staurastrum furcigerum</i>																			
<i>Staurastrum gladiusum</i>																			
<i>Staurastrum hystrix</i>																			
<i>Staurastrum longibranchiatum</i>																			
<i>Staurastrum lunatum</i>																			
<i>Staurastrum manfeldtii</i>																			
<i>Staurastrum pachyrhynchum</i>			P											P		P	P		
<i>Staurastrum pilosum</i>																			
<i>Staurastrum proboscidioides</i>																			
<i>Staurastrum rhabdophorum</i>																			
<i>Staurastrum subcruciatum</i>																			
<i>Staurastrum tetracerum</i>																			
<i>Staurastrum varians</i>																			
<i>Staurastrum triangularis</i>																			
<i>Stigeoclonium</i> sp.																			
<i>Tetalingia granulata</i>		P		261	92	88	62	P	P	P							6	6	
<i>Tetraedron tumidulum</i>																			
<i>Tetraedron limneticum</i>																			
<i>Tetraedron lobulatum</i>																			
<i>Tetraedron minimum</i>				138		35	35												
<i>Tetraedron muticum</i>																			
<i>Tetraedron arthrodesmiforme</i>																			
<i>Tetraedron caudatum</i>																			
<i>Tetraedron trigonum</i>																			
<i>Trochiscia granulata</i>																			
<i>Xanthidium antilopaeum</i>																			
<i>Xanthidium subhastiferum</i> v. <i>murrayi</i>																			
<i>Zygnema</i> sp.																			
CYANOPHYTA (Cyanobacteria)																			
<i>Agmenellum quadruplicatum</i>																			
<i>Agmenellum thermale</i>																			
<i>Anabaena</i> sp.			18853			4713	4713		P										
<i>Anabaena lapponica</i>																			
<i>Anabaena planctonica</i>																			
<i>Anacystis dimidiata</i>									P										
<i>Anacystis marina</i>																			
<i>Anacystis montana</i>																			
<i>Anacystis thermalis</i>		6972	1101		145	2055	1657	767	P		256	256	2639	P	806		689	512	
<i>Aphanocapsa elachista</i>																			
<i>Aphanocapsa elachista</i> v. <i>planctonica</i>																			
<i>Aphanothece clathrata</i>																			
<i>Chlorogloeia microcystoides</i>																			
<i>Chroococcus turgidus</i>																			
<i>Coccolithorax aeruginosa</i>																			
<i>Coelosphaerium kuetzingianum</i>																			
<i>Dactylococcopsis linearis</i>																			
<i>Desmonema wrangellii</i>		5578	24358	59353		22322	13398												
<i>Dichothrix gypsophila</i>		1952	10046	44711	67982	31173	15380	27036	37679	45886	36867	5457	15323	18249	1613	13105	13945	12447	2846
<i>Gloeothece linearis</i> v. <i>composite</i>			413	P		103	103												
<i>Gomphosphaeria lacustris</i>			2477	1307	4939	2181	1049			P	5430	1810					3853	771	771
<i>Lyngbya birgei</i>																			
<i>Lyngbya contorta</i>																			
<i>Microcoleus vaginatus</i>			1239			310	310												
<i>Microcystis flos-aquae</i>			1101		2442	886	580				P								
<i>Nostoc commune</i>		8228	P	17013	507	6437	3996	7300		P	2433	2433	254		P	53605	95023	29776	19326
<i>Oncobrysa cesatii</i>																			
<i>Oscillatoria</i> sp.																			
<i>Oscillatoria limosa</i>																			
<i>Pseudanabaena</i> sp.																			
<i>Schizogonium murale</i>																			
<i>Schizothrix calcicola</i>		43927	103074	83670	35153	66456	16136	149645	131390	205593	162209	22323	11508	8031	3180	19405	76233	23671	13404
<i>Scopulonema minus</i>																			
<i>Stigonema mammosum</i>																			
Unidentified Cyanophyte akinete								192			64	64					232	51	51
Total Algal Density (No. cells/cm²)	116474	304066	270477	141732	208187	46458	213393	189643	290921	231319	30579	40620	30499	7688	134133	296811	101950	53272	

^a P = present, but not encountered during routine cell counts; SE = standard error.

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	Meliadine Lake South Basin (ML-S)					Meliadine Lake Southeast Basin (ML-SE)					Meliadine Lake West Basin (ML-W)						
	July 1998					July 1998					July 1997						
	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE
BACILLARIOPHYTA (Diatoms)																	
<i>Achnanthes detha</i>											2092		1335			685	436
<i>Achnanthes flexella</i>	P		P					P	P			P	P	P	15	3	3
<i>Achnanthes lanceolata</i>	P		P								P					3	3
<i>Achnanthes minutissima</i>	2887	4066	6136	4363	950	185	1058	743	662	255	29808	210482	45507	858	725	57476	39208
<i>Achnanthes minutissima v. cryptocephala</i>	P	P	P			P	59	60	40	20	698	6275	890	43		1581	1187
<i>Amphipleura</i> sp.																	
<i>Amphora</i> sp.																	
<i>Amphora ovalis</i>	P		P								P	P	P		P		
<i>Amphora ovalis v. pediculus</i>																	
<i>Anomoeoneis</i> sp.																	
<i>Anomoeoneis vitrea</i>	P	P	P										P				
<i>Asterionella formosa</i>	P	P	P										P				
<i>Caloneis</i> sp.	P	P	P														
<i>Caloneis ventricosa</i>																	
<i>Caloneis ventricosa v. truncatula</i>											P	P	223			45	45
<i>Cocconeis diminuta</i>																	
<i>Cocconeis pediculus</i>																	
<i>Cocconeis placentula</i>	P		P														
<i>Cocconeis placentula v. euglypta</i>																	
<i>Cocconeis</i> sp.								P	P				P				
<i>Coscinodiscus denarius</i>																	
<i>Coscinodiscus lacustris</i>																	
<i>Cyclotella</i> sp.														43		9	9
<i>Cyclotella antiqua</i>	P										P						
<i>Cyclotella comta</i>	P	P	P								P	P	P				
<i>Cyclotella glomerata</i>	P	P						P									
<i>Cyclotella kutzingiana</i>	P												P	P			
<i>Cyclotella meneghiniana</i>													P	P			
<i>Cyclotella ocellata</i>	P					P						P	P		P		
<i>Cyclotella striata</i>		P	P										P	P		P	
<i>Cymbella affinis</i>	603	P	P	201	201	P											
<i>Cymbella amphioxys</i>												P	P	P			
<i>Cymbella aspera</i>																	
<i>Cymbella cistula</i>																	
<i>Cymbella cuspidata</i>													P	P			
<i>Cymbella cymbiformis</i>	P		P								P	P					
<i>Cymbella cymbiformis v. nonpunctata</i>											437	523	P			192	118
<i>Cymbella gracilis</i>	P	P	P											P			
<i>Cymbella lanceolata</i>		739		246	246												
<i>Cymbella mexicana v. janischii</i>		P															
<i>Cymbella minuta</i>	P	370	P	123	123	92	59	211	121	46	1046	1747	445	72		662	329
<i>Cymbella naviculiformis</i>	P		P			P											
<i>Cymbella sinuata</i>											P						
<i>Cymbella tumida</i>																	
<i>Cymbella turgida</i>													88			18	18
<i>Cymbella turgidula</i>																	
<i>Cymbella</i> sp.											P	P	P		P		
<i>Denticula tenuis</i>	P	P	P			P	51	181	77	54	P	P	P				
<i>Diatoma elongatum</i>	3429	739	4448	2872	1106	624	216	61	300	168	13249	P	223	76	433	2796	2614
<i>Diatoma vulgare</i>													156			31	31
<i>Didymosphenia geminata</i>																	
<i>Diploneis</i> sp.	P					P		P						P	P		
<i>Diploneis elliptica</i>											P	P	P				
<i>Diploneis finnica</i>																	
<i>Diploneis interrupta</i>																	
<i>Diploneis ovalis</i>																	
<i>Epithemia sorex</i>	P	P	P					P			558	18041	2096	39	15	4150	3493
<i>Eunotia arcus</i>																	
<i>Eunotia exigua</i>													P	P			
<i>Eunotia flexuosa</i>																	
<i>Eunotia glacialis</i>	P	1109		370	370									P			
<i>Eunotia maior</i>																	
<i>Eunotia papilio</i>													P				
<i>Eunotia praeurpta</i>	P	P	P									P	P	P	P		
<i>Eunotia praeurpta v. bidens</i>																	
<i>Eunotia sudetica</i>																	
<i>Eunotia</i> sp.											523	P				105	105
<i>Fragilaria brevistriata</i>																	
<i>Fragilaria construens</i>	P		P					P	P								
<i>Fragilaria crotonensis</i>		1109	P	370	370												
<i>Fragilaria intermedia</i>																	
<i>Fragilaria pinnata</i>	P		P					P	P						29	6	6
<i>Frustulia vulgaris</i>																	
<i>Gomphonema</i> sp.																	
<i>Gomphonema acuminatum</i>	P																
<i>Gomphonema acuminatum v. coronata</i>																	
<i>Gomphonema angustatum</i>	722	P	P	241	241					P					15	3	3
<i>Gomphonema constrictum</i>																	
<i>Gomphonema gracile</i>	P	370	409	260	130												
<i>Gomphonema intricatum v. vibrio</i>																	
<i>Gomphonema olivaceum</i>																	
<i>Gomphonema parvulum</i>																	
<i>Gyrosigma</i> sp.																	
<i>Hantzschia amphioxys</i>		P															
<i>Melosira</i> sp.																	
<i>Melosira granulata</i>																	
<i>Meridion circulare</i>																	
<i>Navicula</i> sp.																	
<i>Navicula amphibola</i>																	
<i>Navicula anglica</i>								P	P								
<i>Navicula aspera</i>																	
<i>Navicula bacillum</i>																	
<i>Navicula decussis</i>																	
<i>Navicula dolosa</i>																	
<i>Navicula capitata</i>								P	P								
<i>Navicula cryptocephala</i>	P	P	P					235	61	99	70					431	415
<i>Navicula cryptocephala v. intermedia</i>																2412	1865
<i>Navicula cuspidata</i>																	

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	Meliadine Lake South Basin (ML-S)					Meliadine Lake Southeast Basin (ML-SE)					Meliadine Lake West Basin (ML-W)						
	July 1998					July 1998					July 1997						
	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE
<i>Navicula exigua</i>											P	523	P	P	P	105	105
<i>Navicula exigua</i> v. <i>capitata</i>																	
<i>Navicula lacustris</i>																	
<i>Navicula laevis</i>																	
<i>Navicula lanceolata</i>						92			31	31							
<i>Navicula mutica</i>																	
<i>Navicula placenta</i>																	
<i>Navicula pseudocutiformis</i>																	
<i>Navicula pupula</i>		P					P	P					P		P		
<i>Navicula radiosa</i>		P									494	523	P	P	P	203	125
<i>Navicula reinhardtii</i>																	
<i>Navicula rhynchocephala</i>																	
<i>Navicula tripunctata</i>		P															
<i>Navicula tripunctata</i> v. <i>schizonemoides</i>																	
<i>Navicula viridula</i>	242	739	807	596	178									P	10	2	2
<i>Nedium</i> sp.																	
<i>Nedium bisulcatum</i>																	
<i>Nedium dubium</i>																	
<i>Nedium hitchcockii</i>														P			
<i>Nedium iridis</i> v. <i>amphigomphus</i>													P	P			
<i>Nitzschia</i> sp.						P	P	P							P		
<i>Nitzschia acicularis</i>																	
<i>Nitzschia amphibia</i>											P	1046	P		209	209	
<i>Nitzschia angustata</i>	P	P									P	1046	P	P	209	209	
<i>Nitzschia dissipata</i>																	
<i>Nitzschia filiformis</i>	361	185	P	182	104	81	176	121	126	28	P	P	P		29	6	6
<i>Nitzschia fonticola</i>		P	P				P				1700	P	P		340	340	
<i>Nitzschia palea</i>	P	P															
<i>Nitzschia sigmoidea</i>		P	P				178		59	59			P	P	P		
<i>Pinnularia</i> sp.													P	P	P		
<i>Pinnularia biceps</i>											P		P				
<i>Pinnularia borealis</i>																	
<i>Pinnularia maior</i>																	
<i>Pinnularia mesolepta</i>	P						P	P									
<i>Pinnularia nodosa</i>													P	P			
<i>Pinnularia streptoraphe</i>																	
<i>Pinnularia viridis</i>																	
<i>Rhizosolenia longiseta</i>																	
<i>Rhoicosphenia curvata</i>																	
<i>Rhopalodia gibba</i>	P	P	P														
<i>Rhopa;pdoa gebberula</i>							7	P	2	2	P	P	P	P			
<i>Stauroneis anceps</i>	P	P	P														
<i>Stauroneis phoenicenteron</i>																	
<i>Stauroneis smithii</i>																	
<i>Stauroneis</i> sp.																	
<i>Stephanodiscus astraea</i>	P		P								P		P	P	15	3	3
<i>Suriella</i> sp.	P										P	P					
<i>Suriella angustata</i>																	
<i>Synedra actinastroides</i>	6271	12492	6290	8351	2071	5987	4104	4057	4716	636	3007	30592	2449		345	7279	5857
<i>Synedra acus</i>			P														
<i>Synedra</i> sp.																	
<i>Synedra ulna</i>	271	P	P	90	90	277	29		102	88		345	P		69	69	
<i>Tabellaria fenestrata</i>	722	1663	3375	1920	777	P	P	346	115	115	P	1046		P	P	209	209
<i>Tabellaria flocculosa</i>	4281	1109	4642	3344	1122	P	103	226	110	65	558	13596	1335	57	59	3121	2629
CRYPTOPHYTA (Cryptomonads)																	
<i>Cryptomonas curvata</i>																	
<i>Cryptomonas erosa</i>																	
<i>Cryptomonas ovata</i>								60	20	20	P		P				
<i>Cryptomonas reflexa</i>																	
<i>Katablepharis ovalis</i>																	
<i>Rhodomonas minuta</i>																	
CHRYSTOPHYTA (Golden-Brown Algae)																	
<i>Chrysiaster catenatum</i>	361			120	120	92		60	51	27	261		223		97	60	
<i>Chrysococcus</i> sp.																	
<i>Chrysoikos</i> sp.																	
<i>Chrysoisphaerella rodhei</i>																	
<i>Dinobryon crenulatum</i>																	
<i>Dinobryon divergens</i>	361	1756		706	535	P	59	121	40	40					29	6	6
<i>Dinobryon sertularia</i>	1434	2218	818	1490	405	P	235	181	139	71		P	P	P	323	65	65
<i>Dinobryon sertularia</i> v. <i>protuberans</i>	7128	6099	9408	7545	978	516	397	402	438	39	261	1046		43	1471	564	295
<i>Dinobryon sociale</i>	1083	924	2045	1351	350	1063	323	482	623	225	261	1046	P	14	1025	469	236
<i>Dinobryon tabellariae</i>	P	P	818	273	273	92	265		119	78	P				29	6	6
<i>Ishimoichloron trispinatum</i>	178	P	P	59	59	P	118	60	59	34		1046	P	P	59	221	207
<i>Kephyrion</i> sp.																	
<i>Kephyrion boreale</i>	P	P	818	273	273	92	118	P	70	36		P					
<i>Ochromonas</i> sp.	1083	3696	818	1866	918		235	4350	1528	1412					44	9	9
<i>Ochromonas stellaris</i>																	
<i>Ophiocytium</i> sp.													P				
<i>Pseudokephyron</i> sp.																	
<i>Stichogloea doederleinii</i>	263	14415	3272	5983	4304	92			31	31							
<i>Synura</i> sp.																	
Unidentified statospore	361	739	614	571	111	554	59	663	425	186	1307	2092	668	186	902	1031	321
PYRROPHYTA (Dinoflagellates)																	
<i>Glenodinium</i> sp.																	
<i>Gymnodinium</i> sp.																	
<i>Gymnodinium uberrimum</i>	156	863	202	407	228	92	P		31	31	P	1046	P		44	218	207
<i>Peridinium</i> sp.	P	P	404	135	135		P	P				P	88			18	18
<i>Peridinium aciculiferum</i>		185	P	62	62	185	74	241	167	49	261			107	15	77	50
<i>Peridinium cinctum</i>		P	P											11	5	3	2
<i>Peridinium palatinum</i>		P															
<i>Peridinium palustre</i>																	
<i>Peridinium willei</i>																	
Unidentified cyst	1083	277	202	521	282	P	103	151	85	45		1046	223	14	70	271	198
EUGLENOPHYTA (Euglenoids)																	
<i>Euglena</i> sp.																	
<i>Phacus</i> sp.																	
<i>Trachelomonas</i> sp.																	

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Species	Meliadine Lake South Basin (ML-S)					Meliadine Lake Southeast Basin (ML-SE)					Meliadine Lake West Basin (ML-W)						
	July 1998					July 1998					July 1997						
	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE
<i>Penium</i> sp.	P																
<i>Penium margaritaceum</i>																	
<i>Pleurotaenium</i> sp.																	
<i>Pleurotaenium trabecula</i>																	
<i>Protoderma</i> sp.																	
<i>Scenedesmus bijuga</i>														29	6	6	
<i>Scenedesmus acuminatus</i>																	
<i>Scenedesmus arcuatus</i>																	
<i>Scenedesmus denticulatis</i>																	
<i>Scenedesmus eornis</i>																	
<i>Scenedesmus incrassatulus</i>		1479		493	493				P								
<i>Scenedesmus obliquus</i>																	
<i>Scenedesmus quadricauda</i>			P								P	P		44	9	9	
<i>Scenedesmus spinosus</i>		P															
<i>Scenedesmus wisconsinensis</i>																	
<i>Spirogyra</i> sp.								P									
<i>Staurastrum</i> sp. a	P	P	P								P		P				
<i>Staurastrum</i> sp. b																	
<i>Staurastrum</i> sp. c																	
<i>Staurastrum anatinum</i> v. <i>biradiatum</i>																	
<i>Staurastrum antilopaeum</i>																	
<i>Staurastrum anatinum</i>																	
<i>Staurastrum apiculatum</i>																	
<i>Staurastrum borgeanum</i>	P	P	P										P				
<i>Staurastrum brebissonii</i>																	
<i>Staurastrum clevei</i>																	
<i>Staurastrum curvatum</i>																	
<i>Staurastrum cuspidatum</i>																	
<i>Staurastrum dejectum</i>			P					P	40	13	13						
<i>Staurastrum furcigerum</i>																	
<i>Staurastrum gladiusum</i>																	
<i>Staurastrum hystrix</i>																	
<i>Staurastrum longibranchiatum</i>																	
<i>Staurastrum lunatum</i>																	
<i>Staurastrum manfeldtii</i>																	
<i>Staurastrum pachyrhynchum</i>	P	185	P	62	62								P	P		P	
<i>Staurastrum pilosum</i>																	
<i>Staurastrum proboscidioidum</i>																	
<i>Staurastrum rhabdophorum</i>																	
<i>Staurastrum subcruciatum</i>																	
<i>Staurastrum tetracerum</i>	P	P															
<i>Staurastrum varians</i>			P														
<i>Staurastrum triangularis</i>																	
<i>Stigeoclonium</i> sp.		2957		986	986												
<i>Teilingia granulata</i>	1083		1015	699	350	370	176	60	202	90	261	2092	264	14	29	532	394
<i>Tetraedron tumidulum</i>															P		
<i>Tetraedron limneticum</i>																	
<i>Tetraedron lobulatum</i>																	
<i>Tetraedron minimum</i>	P														P		
<i>Tetraedron muticum</i>																	
<i>Tetraedron arthrodesmiforme</i>																	
<i>Tetraedron caudatum</i>								P									
<i>Tetraedron trigonum</i>																	
<i>Trochiscia granulata</i>														14		3	3
<i>Xanthidium antilopaeum</i>																	
<i>Xanthidium subhastiferum</i> v. <i>murrayi</i>																	
<i>Zygnema</i> sp.	P	1756	1009	922	509										298	60	60
CYANOPHYTA (Cyanobacteria)																	
<i>Agmenellum quadruplicatum</i>															293	59	59
<i>Agmenellum thermale</i>	1444			481	481	185	P	1506	564	474							
<i>Anabaena</i> sp.	3970	739	P	1570	1219							12550			2510	2510	
<i>Anabaena lapponica</i>																	
<i>Anabaena planctonica</i>	P																
<i>Anacystis dimidiata</i>	361	731	P	364	211												
<i>Anacystis marina</i>																	
<i>Anacystis montana</i>														100	20	20	
<i>Anacystis thermalis</i>		23656	21596	15084	7565										5528	5417	
<i>Aphanocapsa elachista</i>			118216	39405	39405	5360	6174	8074	6536	804				445			
<i>Aphanocapsa elachista</i> v. <i>planctonica</i>	281886	90928	8181	126998	81044										4005	801	801
<i>Aphanothece clathrata</i>		11089	7363	6151	3258										8367	1780	1804
<i>Chlorogloea microcystoides</i>																	
<i>Chroococcus turgidus</i>																	
<i>Coccolithus aeruginosa</i>	891			297	297	92		1687	593	548				P	890	15	181
<i>Coelosphaerium kuetzingianum</i>																	
<i>Dactylococopsis linearis</i>	P	P	5727	1909	1909			P							57	748	161
<i>Desmonema wrangelii</i>																	
<i>Dichothrix gypsophila</i>	33566	29200	417234	160000	128623	54797	42192	39709	45566	4671	59353			2003		12271	11777
<i>Gloeotheca linearis</i> v. <i>composite</i>											44711	P		30041	5079	1995	16365
<i>Gomphosphaeria lacustris</i>			P														
<i>Lyngbya birgei</i>																	
<i>Lyngbya contorta</i>			P														
<i>Microcoleus vaginatus</i>	P							P									
<i>Microcystis flos-aquae</i>	39341	P	P	13114	13114												
<i>Nostoc commune</i>	P	P	P			24211	17288	15185	18895	2727	17013	135964	60193	2332	220	43144	25590
<i>Oncobrysa cesatii</i>																	
<i>Oscillatoria</i> sp.																	
<i>Oscillatoria limosa</i>																	
<i>Pseudanabaena</i> sp.		5175	19982	8386	5988												
<i>Schizogonium murale</i>						P	P										
<i>Schizothrix calcicola</i>	695871	623929	618897	646232	24862	140088	65567	91710	99122	21829	83670	109817	29928	3605	5134	46431	21467
<i>Scopulonema minus</i>	21656	11828	8181	13888	4024	370	529		300	157							
<i>Stigonema mammosum</i>	P																
Unidentified Cyanophyte akinete																	
Total Algal Density (No. cells/cm²)	1132153	875536	1292656	1100115	121473	241318	145832	172661	186604	28432	270477	877054	224174	13187	16978	280374	158122

^a P = present, but not encountered during routine cell counts; SE = standard error.

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	Meliadine Lake West Basin (ML-W)					Little Meliadine Lake (LML)					Peter Lake (PL)								
	July 1998					July 1998					July 1998								
	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE		
BACILLARIOPHYTA (Diatoms)																			
<i>Achnanthes detha</i>			P				P	P				P					P		
<i>Achnanthes flexella</i>		P	P	P			P	P									P		
<i>Achnanthes lanceolata</i>							P	P									P		
<i>Achnanthes minutissima</i>	745	170	199	371	187	27099	29099	32961	29720	1720	1937	P	258	P	P		439	378	
<i>Achnanthes minutissima</i> v. <i>cryptocephala</i>	88	85	100	91	5		P	371		124	124	P	P	177	P	736	183	143	
<i>Amphipleura</i> sp.			P									P							
<i>Amphora</i> sp.		P																	
<i>Amphora ovalis</i>		P					P	P	P										
<i>Amphora ovalis</i> v. <i>pediculus</i>		P						P	P										
<i>Anomoeoneis</i> sp.																			
<i>Anomoeoneis vitrea</i>			P										P						
<i>Asterionella formosa</i>			P					P					P						
<i>Caloneis</i> sp.		P													P				
<i>Caloneis ventricosa</i>							P	P	P										
<i>Caloneis ventricosa</i> v. <i>truncatula</i>																			
<i>Cocconeis diminuta</i>							P												
<i>Cocconeis pediculus</i>												P							
<i>Cocconeis placentula</i>																			
<i>Cocconeis placentula</i> v. <i>euglypta</i>							P					P		P					
<i>Cocconeis</i> sp.									P										
<i>Coscinodiscus denarius</i>																			
<i>Coscinodiscus lacustris</i>																			
<i>Cyclotella</i> sp.																			
<i>Cyclotella antiqua</i>							P												
<i>Cyclotella comta</i>			P				P	P	P				P	P	258	682	P	188	133
<i>Cyclotella glomerata</i>		P										P							
<i>Cyclotella kuzingiana</i>		P					P	P				P							
<i>Cyclotella meneghiniana</i>																			
<i>Cyclotella ocellata</i>			P				P	P	P									P	
<i>Cyclotella striata</i>							P	P	706	235	235								
<i>Cymbella affinis</i>							1122	1605	P	909	475								
<i>Cymbella amphioxys</i>																			
<i>Cymbella aspera</i>																			
<i>Cymbella cistula</i>																			
<i>Cymbella cuspidata</i>			P				P			P									
<i>Cymbella cymbiformis</i>																			
<i>Cymbella cymbiformis</i> v. <i>nonpunctata</i>																			
<i>Cymbella gracilis</i>								P	P										
<i>Cymbella lanceolata</i>								P											
<i>Cymbella mexicana</i> v. <i>janischii</i>																			
<i>Cymbella minuta</i>	77	P	P	26	26	2746	371	2999	2039	837	P	P	P	341	245	117		73	
<i>Cymbella naviculiformis</i>		P					P	P	P										
<i>Cymbella sinuata</i>																			
<i>Cymbella tumida</i>																			
<i>Cymbella turgida</i>								P	P						P				
<i>Cymbella turgidula</i>																			
<i>Cymbella</i> sp.									351	117	117								
<i>Denticula tenuis</i>																			
<i>Diatoma elongatum</i>	833	341	398	524	155	6704	3429	3264	4466	1120	645	256	2324	657	1717	1120		387	
<i>Diatoma vulgare</i>																			
<i>Didymosphenia geminata</i>																			
<i>Diploneis</i> sp.																			
<i>Diploneis elliptica</i>							P	P	P										
<i>Diploneis finnica</i>																			
<i>Diploneis interrupta</i>																			
<i>Diploneis ovalis</i>								P	P										
<i>Epithemia sorex</i>		P	P			655	362	353	457	99									
<i>Eunotia arcus</i>																			
<i>Eunotia exigua</i>																			
<i>Eunotia flexuosa</i>																			
<i>Eunotia glacialis</i>			P					P	353	118	118		P						
<i>Eunotia maior</i>																			
<i>Eunotia papillo</i>			P																
<i>Eunotia praeurpta</i>																			
<i>Eunotia praeurpta</i> v. <i>bidens</i>																			
<i>Eunotia sudetica</i>																			
<i>Eunotia</i> sp.			P																
<i>Fragilaria brevistriata</i>																			
<i>Fragilaria construens</i>		P					P	P	P										
<i>Fragilaria crotonensis</i>		P					P	P	P				P		P				
<i>Fragilaria intermedia</i>																			
<i>Fragilaria pinnata</i>		P	85	P	28	28	P	P	P				P			1472	294		294
<i>Frustulia vulgaris</i>																			
<i>Gomphonema</i> sp.																			
<i>Gomphonema acuminatum</i>																			
<i>Gomphonema acuminatum</i> v. <i>coronata</i>																			
<i>Gomphonema angustatum</i>																			
<i>Gomphonema angustatum</i> v. <i>constrictum</i>																			
<i>Gomphonema gracile</i>																			
<i>Gomphonema gracile</i> v. <i>vibrio</i>																			
<i>Gomphonema intracatum</i> v. <i>vibrio</i>																			
<i>Gomphonema olivaceum</i>																			
<i>Gomphonema olivaceum</i> v. <i>parvulum</i>																			
<i>Gomphonema parvulum</i>																			
<i>Gyrosigma</i> sp.																			
<i>Hantzschia amphioxys</i>																			
<i>Melosira</i> sp.			P																
<i>Melosira granulata</i>																			
<i>Meridion circulare</i>																			
<i>Navicula</i> sp.																			
<i>Navicula amphibola</i>																			
<i>Navicula anglica</i>																			
<i>Navicula aspera</i>																			
<i>Navicula bacillum</i>																			
<i>Navicula decussis</i>																			
<i>Navicula dolosa</i>																			
<i>Navicula capitata</i>																			
<i>Navicula cryptocephala</i>		P	P	P															
<i>Navicula cryptocephala</i> v. <i>intermedia</i>																			
<i>Navicula cuspidata</i>																			

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Species	Meliadine Lake West Basin (ML-W)					Little Meliadine Lake (LML)					Peter Lake (PL)						
	July 1998					July 1998					July 1998						
	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE
<i>Navicula exigua</i>																	
<i>Navicula exigua v. capitata</i>																	
<i>Navicula lacustris</i>							P	P									
<i>Navicula laevisissima</i>																	
<i>Navicula lanceolata</i>						2245		2410	1552	777	P						
<i>Navicula mutica</i>						P		P									
<i>Navicula placenta</i>								P									
<i>Navicula pseudoscutiformis</i>																	
<i>Navicula pupula</i>	P	P	P					P	P				P	P			
<i>Navicula radiosa</i>						3367	528	353	1416	977			P				
<i>Navicula reinhardtii</i>			P					P									
<i>Navicula rhynchocephala</i>																	
<i>Navicula tripunctata</i>								P									
<i>Navicula tripunctata v. schizonemoides</i>																	
<i>Navicula viridula</i>		85	100	62	31	P	452	1814	755	545							
<i>Nedium sp.</i>														P			
<i>Nedium bisulcatum</i>																	
<i>Nedium dubium</i>																	
<i>Nedium hitchcockii</i>	P							P									
<i>Nedium iridis v. amphigomphus</i>																	
<i>Nitzschia sp.</i>		P						P									
<i>Nitzschia acicularis</i>																	
<i>Nitzschia amphibia</i>								P					353			71	71
<i>Nitzschia angustata</i>								P	P								
<i>Nitzschia dissipata</i>											P						
<i>Nitzschia filiformis</i>	88	57	P	48	26	374	723	352	483	120							
<i>Nitzschia fonticola</i>			P			P		P						341		68	68
<i>Nitzschia palea</i>			P														
<i>Nitzschia sigmoidea</i>	P					748	P	P	249	249							
<i>Pinnularia sp.</i>	P		P			P	P	P					P				
<i>Pinnularia biceps</i>																	
<i>Pinnularia borealis</i>																	
<i>Pinnularia maior</i>																	
<i>Pinnularia mesolepta</i>			P			P	P										
<i>Pinnularia nodosa</i>																	
<i>Pinnularia streptoraphe</i>																	
<i>Pinnularia viridis</i>																	
<i>Rhizosolenia longiseta</i>																	
<i>Rhoicosphenia curvata</i>																	
<i>Rhopalodia gibba</i>	P		P			P	302	153	152	87							
<i>Rhopalodia gibberula</i>																	
<i>Stauroneis anceps</i>	P	P	P			P	P	P						P	P		
<i>Stauroneis phoenicenteron</i>																	
<i>Stauroneis smithii</i>																	
<i>Stauroneis sp.</i>																	
<i>Stephanodiscus astraera</i>			P			374	P	P	125	125							
<i>Suriella sp.</i>						P	P										
<i>Suriella angustata</i>																	
<i>Synedra actinastroides</i>	658	2888	2785	2110	727	12784	9574	9844	10734	1028	7666	2585	6435	8921	6644	6450	1062
<i>Synedra acus</i>						251			84	84			P	1364		273	273
<i>Synedra sp.</i>																	
<i>Synedra ulna</i>		P	P			P	P	P									
<i>Tabellaria fenestrata</i>	164	P	697	287	210	748	P	1052	600	313			P	P	682	239	184
<i>Tabellaria flocculosa</i>	351	2001	623	992	511	561	4881	202	1881	1503	6107	1304	2697	5406	9378	4979	1406
CRYPTOPHYTA (Cryptomonads)																	
<i>Cryptomonas curvata</i>																	
<i>Cryptomonas erosa</i>																	
<i>Cryptomonas ovata</i>																	
<i>Cryptomonas reflexa</i>																	
<i>Katablepharis ovalis</i>																	
<i>Rhodomonas minuta</i>																	
CHRYSOPHYTA (Golden-Brown Algae)																	
<i>Chrysiasterum catenatum</i>													P				
<i>Chrysococcus sp.</i>																	
<i>Chrysoikoides sp.</i>																	
<i>Chrysoisphaerella rodheii</i>																	
<i>Dinobryon crenulatum</i>																	
<i>Dinobryon divergens</i>	88		P	29	29	1747	619	353	906	427	387	67	P	P	P	91	75
<i>Dinobryon sertularia</i>	P	85	100	62	31		371		124	124		67	P	P		13	13
<i>Dinobryon sertularia v. protuberans</i>	1545	2150	971	1555	340	P	371	3175	1182	1002	145	735	530	569	491	494	97
<i>Dinobryon sociale</i>	986	312	1096	798	245	655	649	353	552	100	194	936	660	1704	245	748	275
<i>Dinobryon tabellariae</i>	175	85	199	153	35	374			125	125			P				
<i>Ishtmochloron trispinatum</i>	P	85	100	62	31		371	353	241	121	194	100	P	438	358	218	81
<i>Kephyrion sp.</i>	88			29	29												
<i>Kephyrion boreale</i>	438	255	199	297	72		741	353	365	214			530			106	106
<i>Ochromonas spa</i>	789	1192	1594	1192	232	748			249	249	1	402				81	80
<i>Ochromonas stellaris</i>								706	235	235							
<i>Ophiocytium sp.</i>			P										P				
<i>Pseudokephyrion sp.</i>																	
<i>Stichogloea doederleinii</i>	2280	3788	2565	2878	463	748	741	353	614	131	1259	267	259			357	233
<i>Synura sp.</i>		85		28	28												
Unidentified statospore	263	85	100	149	57		1112	14406	5173	4628		267	530	P	P	159	106
PYRROPHYTA (Dinoflagellates)																	
<i>Glenodinium sp.</i>																	
<i>Gymnodinium sp.</i>																	
<i>Gymnodinium uberrimum</i>	P		P			P	181	351	177	101			P				
<i>Peridinium sp.</i>	P		P			P		P			P						
<i>Peridinium aciculiferum</i>	175	P	P	58	58	P	181	877	353	267		P	P	P	245	49	49
<i>Peridinium cinctum</i>			P					P					P				
<i>Peridinium palatinum</i>																	
<i>Peridinium palustre</i>																	
<i>Peridinium willei</i>																	
Unidentified cyst	175	255	P	143	75	1947	1175	2530	1884	392	96	67				33	20
EUGLENOPHYTA (Euglenoids)																	
<i>Euglena sp.</i>																	
<i>Phacus sp.</i>							P										
<i>Trachelomonas sp.</i>																P	

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Species	Meliadine Lake West Basin (ML-W)					Little Meliadine Lake (LML)					Peter Lake (PL)							
	July 1998					July 1998					July 1998							
	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	
CHLOROPHYTA (Green Algae)																		
<i>Actinotaenium</i> sp.																		
<i>Ankistrodesmus convolutus</i>																		
<i>Ankistrodesmus falcatus</i>							741	P	247	247								
<i>Ankistrodesmus falcatus</i> v. <i>spiralis</i>								P										
<i>Ankistrodesmus gelifacius</i>																		
<i>Arthrodesmus triangularis</i>	P					P					P	P						
<i>Binuclearia</i> sp.	P							701	234	234								
<i>Botryococcus</i> sp.																		
<i>Bulbochaete</i> sp.	351		P	117	117	P	181	P	60	60	P	67	787	3835	P	938	739	
<i>Chlamydomonas</i> sp. a							649		216	216								
<i>Chlamydomonas</i> sp. b						374			125	125								
<i>Closterium</i> sp.																		
<i>Closterium acerosum</i>																		
<i>Closterium actum</i>																		
<i>Closterium dianae</i>																		
<i>Closterium pseudolunula</i>																		
<i>Closterium rostratum</i>																		
<i>Coeloastrum</i> sp.																		
<i>Coeloastrum cambricum</i>																		
<i>Coeloastrum microporum</i>																		
<i>Coeloastrum printzii</i>	P	213	100	104	62		371		124	124	P	P			P			
<i>Coeloastrum sphaericum</i>							P											
<i>Cosmarium</i> sp.								307	102	102								
<i>Cosmarium anceps</i>																		
<i>Cosmarium biculatum</i>																		
<i>Cosmarium botrytis</i>																		
<i>Cosmarium capitulum</i> v. <i>groenlandicum</i>																		
<i>Cosmarium contracta</i>																		
<i>Cosmarium coronatum</i>																		
<i>Cosmarium depressum</i>																		
<i>Cosmarium granulatum</i>							P		P									
<i>Cosmarium holmiense</i> v. <i>intermedium</i>		P	P				P						P	P				
<i>Cosmarium humile</i> v. <i>lacustre</i>	P						P	P	P									
<i>Cosmarium impressulum</i> v. <i>suborthogonum</i>							374	P	353	242								
<i>Cosmarium laeve</i>																		
<i>Cosmarium norimbergense</i>	88			29	29		P											
<i>Cosmarium phaseolus</i> v. <i>phaseolus</i>	P						P	P	P				P					
<i>Cosmarium pokomyanum</i>																		
<i>Cosmarium pseudoprotuberans</i>																		
<i>Cosmarium rectangulare</i>							P	P	P									
<i>Cosmarium rectangulum</i>			P															
<i>Cosmarium reniforme</i>																		
<i>Cosmarium repandum</i>																		
<i>Cosmarium septentrionale</i>	P	P					P	P	570	190	190	P	67	58	P	25	15	
<i>Cosmarium speciosum</i>																		
<i>Cosmarium subgranatum</i>																		
<i>Cosmarium tetraophthalmum</i>									P									
<i>Cosmarium turpinii</i>								P										
<i>Cosmarium turpinii</i> v. <i>podolicum</i>																		
<i>Crucigenia apiculata</i>																		
<i>Crucigenia quadrata</i>							1497		499	499								
<i>Crucigenia rectangularis</i>																		
<i>Cylindrocystis brebissonii</i>	351	85	P	145	106	9821	11491	P	7104	3585	P	P	P					
<i>Desmidiium swartzii</i> v. <i>quadrangulatum</i>																		
<i>Dictyosphaerium pulchellum</i>																		
<i>Elakatothrix</i> sp.	P		P				741	351	364	214	P		P	219		44	44	
<i>Euastrum richteri</i>																		
<i>Euastrum</i> sp.																		
<i>Euastrum bidentatum</i>								P										
<i>Euastrum denticulatum</i>																		
<i>Euastrum dubium</i> v. <i>maius</i>			100	33	33	P	181	P	60	60								
<i>Euastrum elegans</i>			P					P					P	P				
<i>Euastrum gemmatum</i>																		
<i>Euastrum insulare</i> v. <i>silesiacum</i>																		
<i>Euastrum obesum</i>								P										
<i>Euastrum ohioense</i>																		
<i>Euastrum sinosum</i>																		
<i>Euastrum verrucosum</i>									175	58	58							
<i>Gemellcystis neglecta</i>																		
<i>Geminella interrupta</i>																		
<i>Gloeocystis schroeteri</i>	438	P	398	279	140													
<i>Gloeotila pelagica</i>							374	P	1058	353	353	387	P	177		P	113	77
<i>Golenkinia radiata</i> v. <i>brevispina</i>																		
<i>Gonatozygon brebissonii</i>								P										
<i>Gonatozygon monotaenium</i>																		
<i>Hyalotheca</i> sp.																		
<i>Kirchneriella</i> sp.																		
<i>Koliella longiseta</i>																		
<i>Lagerheimia subsalsa</i>																		
<i>Lagerheimia wratislawiensis</i>																		
<i>Micractinium pusillum</i>																		
<i>Monoraphidium</i> sp.																		
<i>Mougeotia</i> sp. a	P	P	P				P	542		181	181	P	P	P	438	P	88	88
<i>Nephrocotium limneticum</i>																		
<i>Ooedogonium</i> sp.																		
<i>Oocystis elliptica</i>	438	85		174	134		3435	3528	2321	1161			P	P				
<i>Oocystis lacustris</i>	438	1277	1494	1070	322	2619	5190	4940	4250	819	387	134	177		736	287	128	
<i>Oocystis solitaria</i>																		
<i>Oonephris obesa</i>																		
<i>Quadrigula closterioides</i>																597	119	119
<i>Phacotus</i> sp.																		
<i>Pandorina morum</i>																		
<i>Pediastrum boryanum</i>																		
<i>Pediastrum boryanum</i> v. <i>ellesmerense</i>							P											
<i>Pediastrum duplex</i>																		
<i>Pediastrum duplex</i> v. <i>clathratum</i>																		
<i>Pediastrum integrum</i> v. <i>scutum</i>																		
<i>Pediastrum tetras</i>																		

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	Meliadine Lake West Basin (ML-W)					Little Meliadine Lake (LML)					Peter Lake (PL)						
	July 1998					July 1998					July 1998						
	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE
<i>Penium</i> sp.																	
<i>Penium margaritaceum</i>																	
<i>Pleurotaenium</i> sp.																	
<i>Pleurotaenium trabecula</i>																	
<i>Protoderma</i> sp.						9727	16559		8762	4804							
<i>Scenedesmus bijuga</i>							1483	1411	965	483							
<i>Scenedesmus acuminatus</i>																	
<i>Scenedesmus arcuatus</i>																	
<i>Scenedesmus denticulatis</i>																	
<i>Scenedesmus ecornis</i>																	
<i>Scenedesmus incrassatulus</i>			P			1497	1483	P	993	497			P				
<i>Scenedesmus obliquus</i>																	
<i>Scenedesmus quadricauda</i>								P	1411	470	470						
<i>Scenedesmus spinosus</i>																	
<i>Scenedesmus wisconsinensis</i>																	
<i>Spirogyra</i> sp.	P												P				
<i>Staurastrum</i> sp. a			100	33	33	P	P	P					P				
<i>Staurastrum</i> sp. b																	
<i>Staurastrum</i> sp. c																	
<i>Staurastrum anatinum</i> v. <i>biradiatum</i>																	
<i>Staurastrum antilopaeum</i>																	
<i>Staurastrum anatinum</i>																	
<i>Staurastrum apiculatum</i>																	
<i>Staurastrum borgeanum</i>		P	P			374	P	P	125	125			P				
<i>Staurastrum brebissonii</i>																	
<i>Staurastrum clevei</i>																	
<i>Staurastrum curvatum</i>																	
<i>Staurastrum cuspidatum</i>																	
<i>Staurastrum dejectum</i>																	
<i>Staurastrum furcigerum</i>							P	P	P								
<i>Staurastrum gladiusum</i>																	
<i>Staurastrum hystrix</i>																	
<i>Staurastrum longibranchiatum</i>																	
<i>Staurastrum lunatum</i>																	
<i>Staurastrum manfeldtii</i>																	
<i>Staurastrum pachyrhynchum</i>									P								
<i>Staurastrum pilosum</i>																	
<i>Staurastrum proboscidioidum</i>																	
<i>Staurastrum rhabdophorum</i>																	
<i>Staurastrum subcruciatum</i>																	
<i>Staurastrum tetracerum</i>																	
<i>Staurastrum varians</i>		85		28	28			P	P								
<i>Staurodesmus triangularis</i>																	
<i>Stigeoclonium</i> sp.																	
<i>Teilingia granulata</i>	438	255	398	364	56	748	3336	706	1597	870						91	75
<i>Tetraedron tumidulum</i>			50	17	17	374			125	125							
<i>Tetraedron limneticum</i>																	
<i>Tetraedron lobulatum</i>																	
<i>Tetraedron minimum</i>						374		253	209	110							
<i>Tetraedron muticum</i>							371	353	241	121							
<i>Tetraedron arthrodsmiforme</i>																	
<i>Tetraedron caudatum</i>													P	P			
<i>Tetraedron trigonum</i>																	
<i>Trochiscia granulata</i>																	
<i>Xanthidium antilopaeum</i>																	
<i>Xanthidium subhastiferum</i> v. <i>murrayi</i>																	
<i>Zygnema</i> sp.	P	P						P	P						2004	620	406
CYANOPHYTA (Cyanobacteria)																	
<i>Agmenellum quadruplicatum</i>																	
<i>Agmenellum thermale</i>		P					P	23286	7762	7762	775					155	155
<i>Anabaena</i> sp.							15198	P	5066	5066							
<i>Anabaena lapponica</i>																	
<i>Anabaena planctonica</i>																	
<i>Anacystis dimidiata</i>	438		P	146	146								P	177	341	491	202
<i>Anacystis marina</i>																	
<i>Anacystis montana</i>															8522	7115	3127
<i>Anacystis thermalis</i>			149	50	50		28914		9638	9638	13170		P			2634	2634
<i>Aphanocapsa elachista</i>	23673	10556	15638	16622	3818			50101	16700	16700					6477	189148	39125
<i>Aphanocapsa elachista</i> v. <i>planctonica</i>	701	6470	3387	3519	1667	99518	63017	9173	57236	26240	33507	9895	64959		21672	12434	37527
<i>Aphanothece clathrata</i>		9704	13646	7783	4055	5238			1746	1746	1937	2808	9356		2820	1723	1723
<i>Chlorogloea microcystoides</i>																	
<i>Chroococcus turgidus</i>																	
<i>Coccolithus aeruginosa</i>																	
<i>Coelosphaerium kuetzingianum</i>																	
<i>Dactylococcopsis linearis</i>							P		P								
<i>Desmonema wrangellii</i>																	
<i>Dichothrix gypsophila</i>	29723	20431	41138	30431	5988	86425	92672	45514	74870	14789	81855	29552	54833	520179	120702	161424	90952
<i>Gloeothece linearis</i> v. <i>composite</i>																	
<i>Gomphosphaeria lacustris</i>														P			
<i>Lyngbya birgei</i>																	
<i>Lyngbya contorta</i>																	
<i>Microcoleus vaginatus</i>																	
<i>Microcystis flos-aquae</i>							P	P	P					P			
<i>Nostoc commune</i>	2893	P	11156	4683	3343	37788	60793	60510	53030	7622	1146	P	2841	P	1472	1092	529
<i>Oncobyrsa cesatii</i>																	
<i>Oscillatoria</i> sp.																	
<i>Oscillatoria limosa</i>																	
<i>Pseudanabaena</i> sp.	1227	P	P	409	409												
<i>Schizogonium murale</i>																	
<i>Schizothrix calcicola</i>	110474	54483	128690	97882	22328	356550	173483	231100	253711	54043	691827	104969	309614	859693	465389	486298	133928
<i>Scopulonema minus</i>	10346	25283	7371	14333	5542	4115	2595	6351	4354	1091	6779	2340	23124	297245	61700	78238	55741
<i>Stigonema mamillatum</i>	P	7747	P	2582	2582												
Unidentified Cyanophyte akinete																	
Total Algal Density (No. cells/cm²)	192023	150763	235641	192809	24505	686403	543186	524599	584729	51119	851886	156952	481200	1718493	871124	815931	261271

P = present, but not encountered during routine cell counts; SE = standard error.

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	A6										A8					
	July 1997					July 1998					July 1997					
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE
BACILLARIOPHYTA (Diatoms)																
<i>Achnanthes detha</i>																
<i>Achnanthes flexella</i>	P	P	132	44	44							3138	530	P	1223	970
<i>Achnanthes lanceolata</i>						P			P ¹	44	11					
<i>Achnanthes minutissima</i>	22479	23978	29523	25327	2142	234	695	1531	1020	870	273	9646	5326	8716	7896	1313
<i>Achnanthes minutissima v. cryptocephala</i>	1583	2988	2813	2461	442	20	43	105	77	61	19					
<i>Amphipleura</i> sp.									42		11					
<i>Amphora</i> sp.																
<i>Amphora ovalis</i>	P	P	132	44	44							P			P	
<i>Amphora ovalis v. pediculus</i>																
<i>Anomooneis</i> sp.																
<i>Anomooneis vitrea</i>																
<i>Asterionella formosa</i>																
<i>Caloneis</i> sp.									P	P						
<i>Caloneis ventricosa</i>																
<i>Caloneis ventricosa v. truncatula</i>			P						P			P			P	
<i>Cocconeis diminuta</i>																
<i>Cocconeis pediculus</i>																
<i>Cocconeis placentula</i>																
<i>Cocconeis placentula v. euglypta</i>																
<i>Cocconeis</i> sp.																
<i>Coscinodiscus denarius</i>																
<i>Coscinodiscus lacustris</i>																
<i>Cyclotella</i> sp.																
<i>Cyclotella antiqua</i>	137	213	132	161	26	34	118	42		49	25	P	132	1394	509	444
<i>Cyclotella comta</i>																
<i>Cyclotella glomerata</i>						P	P									
<i>Cyclotella kutzingiana</i>																
<i>Cyclotella meneghiniana</i>																
<i>Cyclotella ocellata</i>	550	213	265	343	105											
<i>Cyclotella striata</i>									P							
<i>Cymbella affinis</i>						P										
<i>Cymbella amphioxys</i>	P											P	662	4532	1731	1413
<i>Cymbella aspera</i>																
<i>Cymbella cistula</i>																
<i>Cymbella cuspidata</i>																
<i>Cymbella cymbiformis</i>												P		3486	1162	1162
<i>Cymbella cymbiformis v. nonpunctata</i>	757	1547	927	1077	240							697	397	P	365	202
<i>Cymbella gracilis</i>		P				P		P	P			349		P	116	116
<i>Cymbella lanceolata</i>																
<i>Cymbella mexicanum v. janischii</i>																
<i>Cymbella minuta</i>	791	1921	1324	1345	326	20	43	42	88	48	14	1737	1588	5927	3084	1422
<i>Cymbella naviculiformis</i>																
<i>Cymbella sinuata</i>			P													
<i>Cymbella tumida</i>																
<i>Cymbella turgida</i>													3432	1394	1609	997
<i>Cymbella turgidula</i>												312	458	134	301	94
<i>Cymbella</i> sp.						P			P			P	P	P		
<i>Denticula tenuis</i>	P	1868	132	667	602	41	22		P	16	10	697	1506	3486	1896	828
<i>Diatoma elongatum</i>	1514	960	2118	1531	334	396	570	547	628	535	49	349	132	697	393	165
<i>Diatoma vulgare</i>																
<i>Didymosphenia geminata</i>																
<i>Diploneis</i> sp.																
<i>Diploneis elliptica</i>																
<i>Diploneis finnica</i>																
<i>Diploneis interrupta</i>																
<i>Diploneis ovalis</i>																
<i>Epithemia sorex</i>	963	661	P	541	284	P	P	P	22	6	6	6641	5458	6000	6033	342
<i>Eunotia arcus</i>																
<i>Eunotia exigua</i>																
<i>Eunotia flexuosa</i>																
<i>Eunotia glacialis</i>												P	P			
<i>Eunotia maior</i>																
<i>Eunotia papilio</i>																
<i>Eunotia praerupta</i>	413			138	138				P			349	P	1743	697	532
<i>Eunotia praerupta v. bidens</i>																
<i>Eunotia sudetica</i>																
<i>Eunotia</i> sp.																
<i>Fragilaria brevistriata</i>																
<i>Fragilaria construens</i>																
<i>Fragilaria crotonensis</i>	963	P	P	321	321	P			154	39	39	P	P	2092	697	697
<i>Fragilaria intermedia</i>																
<i>Fragilaria pinnata</i>	1652	4433	264	2116	1226	P	P					2966	530	2789	2095	784
<i>Frustulia vulgaris</i>																
<i>Gomphonema</i> sp.																
<i>Gomphonema acuminatum</i>																
<i>Gomphonema acuminatum v. coronata</i>																
<i>Gomphonema angustatum</i>	P	213	P	71	71	P	607	558	325	372	139	P	P	P	465	307
<i>Gomphonema constrictum</i>		P														
<i>Gomphonema gracile</i>																
<i>Gomphonema intricatum v. vibrio</i>																
<i>Gomphonema olivaceum</i>																
<i>Gomphonema parvulum</i>																
<i>Gyrosigma</i> sp.																
<i>Hantzschia amphioxys</i>																
<i>Melosira</i> sp.																
<i>Melosira granulata</i>																
<i>Meridion circulare</i>																
<i>Navicula</i> sp.																
<i>Navicula amphibola</i>																
<i>Navicula anglica</i>									P							
<i>Navicula aspera</i>																
<i>Navicula bacillum</i>																
<i>Navicula decussis</i>																
<i>Navicula dolosa</i>																
<i>Navicula capitata</i>																
<i>Navicula cryptocephala</i>	P	427	976	468	282	20	129	186	66	100	36	1569	1291	1046	1302	151
<i>Navicula cryptocephala v. intermedia</i>	2232	2491		1574	791									1743	581	581
<i>Navicula cuspidata</i>																

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	A6										A8					
	July 1997					July 1998					July 1997					
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE
<i>Navicula exigua</i>	P	P	P									P	P	P		
<i>Navicula exigua</i> v. <i>capitata</i>																
<i>Navicula lacustris</i>																
<i>Navicula laevissima</i>																
<i>Navicula lanceolata</i>						20				5	5					
<i>Navicula mutica</i>																
<i>Navicula placenta</i>																
<i>Navicula pseudoscutiformis</i>																
<i>Navicula pupula</i>	P						22	P	22	11	6		P	P		
<i>Navicula radiosa</i>	P	303	116	140	88							2614	4247	3379	3413	472
<i>Navicula reinhardtii</i>																
<i>Navicula rhynchocephala</i>																
<i>Navicula tripunctata</i>																
<i>Navicula tripunctata</i> v. <i>schizonemoides</i>																
<i>Navicula viridula</i>																
<i>Nedium</i> sp.																
<i>Nedium bisulcatum</i>																
<i>Nedium dubium</i>																
<i>Nedium hitchcockii</i>																
<i>Nedium iridis</i> v. <i>amphigomphus</i>	P											P		P		
<i>Nitzschia</i> sp.																
<i>Nitzschia acicularis</i>																
<i>Nitzschia amphibia</i>																
<i>Nitzschia angustata</i>																
<i>Nitzschia dissipata</i>	3165			1055	1055											
<i>Nitzschia filiformis</i>	137	640	530	436	153	41	P	40	22	26	10	P	P	1046	1277	231
<i>Nitzschia fonticola</i>																
<i>Nitzschia palea</i>																
<i>Nitzschia sigmoidea</i>	P															
<i>Pinnularia</i> sp.	P															
<i>Pinnularia biceps</i>																
<i>Pinnularia borealis</i>																
<i>Pinnularia maior</i>																
<i>Pinnularia mesolepta</i>						P	P									
<i>Pinnularia nodosa</i>																
<i>Pinnularia streptoraphe</i>																
<i>Pinnularia viridis</i>																
<i>Rhizosolenia longiseta</i>																
<i>Rhoicosphenia curvata</i>																
<i>Rhopalodia gibba</i>																
<i>Rhopalodia gibberula</i>	P	P	P													
<i>Stauroneis anceps</i>	P															
<i>Stauroneis phoenicenteron</i>			P													
<i>Stauroneis smithii</i>																
<i>Stauroneis</i> sp.																
<i>Stephanodiscus astraes</i>																
<i>Surirella</i> sp.																
<i>Surirella angustata</i>																
<i>Synedra actinastroides</i>	4038	4980	4971	4663	313	593	2089	1273	1974	1482	347	5229	2449	6972	4883	1317
<i>Synedra acus</i>						P	65	63	18	37	16	P	111	P	37	37
<i>Synedra</i> sp.																
<i>Synedra ulna</i>	92	179	P	90	52	33	38	12	11	24	7	273	364	212	88	109
<i>Tabellaria fenestrata</i>	378	P	265	214	112	P	43	79	22	36	17	312	596	697	535	115
<i>Tabellaria flocculosa</i>	1789	652	474	972	412	P	P	116	231	87	55	1743	1158	5578	2826	1386
CRYPTOPHYTA (Cryptomonads)																
<i>Cryptomonas curvata</i>																
<i>Cryptomonas erosa</i>			P													
<i>Cryptomonas ovata</i>			132	44	44											
<i>Cryptomonas reflexa</i>																
<i>Katablepharis ovalis</i>			264	88	88											
<i>Rhodomonas minuta</i>																
CHRYSOPHYTA (Golden-Brown Algae)																
<i>Chrysiidiatrum catenatum</i>		P	132	44	44											
<i>Chrysococcus</i> sp.			397	132	132											
<i>Chrysoikos</i> sp.																
<i>Chrysoisphaerella rodheii</i>	138			46	46											
<i>Dinobryon crenulatum</i>																
<i>Dinobryon divergens</i>	138		P	46	46	207	306	21	242	194	61					
<i>Dinobryon sertularia</i>	688		264	317	200	102	86	105	154	112	15	P	P			
<i>Dinobryon sertularia</i> v. <i>protuberans</i>	P	213		71	71					7	7	349	523	349	407	58
<i>Dinobryon sociale</i>						102	43	84		57	23					
<i>Dinobryon tabellariae</i>																
<i>Isthmochloron trispinatum</i>	P															
<i>Kephyrion</i> sp.																
<i>Kephyrion boreale</i>		213		71	71	P			22	6	6					
<i>Ochromonas spa</i>	138			46	46			84		21	21					
<i>Ochromonas stellaris</i>																
<i>Ophiocytium</i> sp.																
<i>Pseudokephyrion</i> sp.	138			46	46											
<i>Stichogloeia doederleinii</i>						81	22			26	19					
<i>Synura</i> sp.							P									
Unidentified statospore	688	213	530	477	140	P						349	132	P	160	102
PYRROPHYTA (Dinoflagellates)																
<i>Glenodinium</i> sp.																
<i>Gymnodinium</i> sp.																
<i>Gymnodinium uberrimum</i>	138	P	P	46	46		22	42		16	10	312	332	P	215	107
<i>Peridinium</i> sp.	P	P	P									P	P	P		
<i>Peridinium aciculiferum</i>	275	427	132	278	85	P	43	32	22	24	9	156	P	P	52	52
<i>Peridinium cinctum</i>	P	P	P													
<i>Peridinium palatinum</i>																
<i>Peridinium palustre</i>																
<i>Peridinium willei</i>																
Unidentified cyst		854	265	373	252	20	43			16	10					
EUGLENOPHYTA (Euglenoids)																
<i>Euglena</i> sp.			P													
<i>Phacus</i> sp.		P														
<i>Trachelomonas</i> sp.												P				

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	A6										A8					
	July 1997					July 1998					July 1997					
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE
CHLOROPHYTA (Green Algae)																
<i>Actinotaenium</i> sp.																
<i>Ankistrodesmus convolutus</i>	P													P		
<i>Ankistrodesmus falcatus</i>	P	213	265	159	81											
<i>Ankistrodesmus falcatus</i> v. <i>spiralis</i>	826	640	264	577	165	102	43	127		68	29	349		P	116	116
<i>Ankistrodesmus gelifactus</i>																
<i>Arthrodesmus triangularis</i>																
<i>Binuclearia</i> sp.																
<i>Botryococcus</i> sp.																
<i>Bulbochaete</i> sp.	3303	1761	794	1953	731	95	P	538	804	359	189	6322	8890	1902	5705	2041
<i>Chlamydomonas</i> sp. a		213		71	71											
<i>Chlamydomonas</i> sp. b			P													
<i>Closterium</i> sp.												P		P		
<i>Closterium acerosum</i>																
<i>Closterium actum</i>																
<i>Closterium diana</i>																
<i>Closterium pseudolunula</i>												P				
<i>Closterium rostratum</i>																
<i>Coeloastrum</i> sp.																
<i>Coeloastrum cambricum</i>																
<i>Coeloastrum microporum</i>			P													
<i>Coeloastrum printzii</i>	P															
<i>Coeloastrum sphaericum</i>	2202			734	734							2498	4183	2789	1394	1394
<i>Cosmarium</i> sp.	P															
<i>Cosmarium anceps</i>								P								
<i>Cosmarium biculatum</i>													249		83	83
<i>Cosmarium botrytis</i>												156	249	151	102	51
<i>Cosmarium capitulum</i> v. <i>groenlandicum</i>																
<i>Cosmarium contracta</i>												P	P	P		
<i>Cosmarium coronatum</i>																
<i>Cosmarium depressum</i>	138		P	46	46							P	P			
<i>Cosmarium granulatum</i>	P	110		37	37	15				4	4	349	415		255	129
<i>Cosmarium holmiense</i> v. <i>intermedium</i>	P											P	P	536	179	179
<i>Cosmarium humile</i> v. <i>lacustre</i>	P											P		349	116	116
<i>Cosmarium impressulum</i> v. <i>suborthogonum</i>		P										P				
<i>Cosmarium laeve</i>	P								P	P						
<i>Cosmarium norimbergense</i>	P	P	P									P				
<i>Cosmarium phaseolus</i> v. <i>phaseolus</i>						P	43			11	11					
<i>Cosmarium pokornyianum</i>																
<i>Cosmarium pseudoprotuberans</i>																
<i>Cosmarium rectangulare</i>		110		37	37							156	P	157	104	52
<i>Cosmarium rectangulum</i>																
<i>Cosmarium reniforme</i>																
<i>Cosmarium repandum</i>																
<i>Cosmarium septentrionale</i>						P	P	P	P							
<i>Cosmarium speciosum</i>		110	132	81	41							156	332	760	416	179
<i>Cosmarium subgranatum</i>																
<i>Cosmarium tetraophthalmum</i>												P	P			
<i>Cosmarium turpinii</i>		P						P						P		
<i>Cosmarium turpinii</i> v. <i>podolicum</i>																
<i>Crucigenia apiculata</i>																
<i>Crucigenia quadrata</i>																
<i>Crucigenia rectangularis</i>												P				
<i>Cylindrocystis brebissonii</i>	138	110	99	116	12	P			22	6	6	156	265	1291	571	362
<i>Desmidiium swartzii</i> v. <i>quadrangulatum</i>																
<i>Dictyosphaerium pulchellum</i>																
<i>Elakatothrix</i> sp.	643	213	P	285	189	20		21		10	6	349	261		203	105
<i>Euastropsis richteri</i>													P			
<i>Euastrum</i> sp.																
<i>Euastrum bidentatum</i>	P												P	P	P	
<i>Euastrum denticulatum</i>																
<i>Euastrum dubium</i> v. <i>maius</i>			P					21		5	5	312	784	610	569	138
<i>Euastrum elegans</i>	138	138	132	136	2	20	P	21		10	6	P	P			
<i>Euastrum gemmatum</i>												P	83	P	28	28
<i>Euastrum insulare</i> v. <i>silesiacum</i>																
<i>Euastrum obesum</i>															P	
<i>Euastrum ohioense</i>																
<i>Euastrum sinosum</i>																
<i>Euastrum verrucosum</i>																
<i>Gemelliscystis neglecta</i>																
<i>Geminella interrupta</i>																
<i>Gloeocystis schroeteri</i>	826	3522	2118	2155	778	41	22	21	88	43	16	P		P		
<i>Gloeotila pelagica</i>		P										349	5428	3312	3030	1473
<i>Golenkinia radiata</i> v. <i>brevispina</i>		427	P	142	142											
<i>Gonatozygon brebissonii</i>																
<i>Gonatozygon monotaenium</i>													P	P	P	
<i>Hyalotheca</i> sp.																
<i>Kirchneriella</i> sp.																
<i>Koliella longiseta</i>																
<i>Lagerheimia subsalsa</i>																
<i>Lagerheimia wratislawiensis</i>																
<i>Micractinium pusillum</i>																
<i>Monoraphidium</i> sp.																
<i>Mougeotia</i> sp. a	103	523	486	371	134			42	22	16	10	P	2092		697	697
<i>Nephrocystium limneticum</i>		P										P				
<i>Ooedogonium</i> sp.																
<i>Oocystis elliptica</i>	P		4104	1368	1368				22	6	6	5578	1046	5578	4067	1511
<i>Oocystis lacustris</i>	7018	3842	P	3620	2029	447	151	438	264	325	72	3434	662	7321	3806	1931
<i>Oocystis solitaria</i>						P	43			11	11					
<i>Oonephris obesa</i>														P	P	
<i>Quadrigula closterioides</i>																
<i>Phacotus</i> sp.	1376	427	397	733	321										44	44
<i>Pandorina morum</i>	P		1589	530	530											
<i>Pediastrum boryanum</i>	P	P														
<i>Pediastrum boryanum</i> v. <i>ellesmerense</i>																
<i>Pediastrum duplex</i>																
<i>Pediastrum duplex</i> v. <i>clathratum</i>																
<i>Pediastrum integrum</i> v. <i>scutum</i>		P														
<i>Pediastrum tetras</i>																

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	A6											A8				
	July 1997					July 1998						July 1997				
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE
<i>Penium</i> sp.	P															
<i>Penium margaritaceum</i>																
<i>Pleurotaenium</i> sp.																
<i>Pleurotaenium trabecula</i>																
<i>Protoderma</i> sp.																
<i>Scenedesmus bijuga</i>	275			92	92	P										
<i>Scenedesmus acuminatus</i>														P		
<i>Scenedesmus arcuatus</i>	P												332		111	111
<i>Scenedesmus denticulatus</i>												P		516	172	172
<i>Scenedesmus ecomis</i>																
<i>Scenedesmus incrassatulus</i>	1101	2348	3045	2165	569	163	86	169	P	105	40	P	P	P		
<i>Scenedesmus obliquus</i>																
<i>Scenedesmus quadricauda</i>			P													
<i>Scenedesmus spinosus</i>																
<i>Scenedesmus wisconsinensis</i>																
<i>Spirogyra</i> sp.																
<i>Staurastrum</i> sp. a	P	110	132	81	41							312	166	583	354	122
<i>Staurastrum</i> sp. b																
<i>Staurastrum</i> sp. c																
<i>Staurastrum anatinum</i> v. <i>biradiatum</i>																
<i>Staurastrum antilopaeum</i>																
<i>Staurastrum anatinum</i>																
<i>Staurastrum apiculatum</i>																
<i>Staurastrum borgeanum</i>								P								
<i>Staurastrum brebissonii</i>												P	P	P		
<i>Staurastrum clevei</i>																
<i>Staurastrum curvatum</i>																
<i>Staurastrum cuspidatum</i>																
<i>Staurastrum dejectum</i>			132	44	44							P	P			
<i>Staurastrum furcigerum</i>																
<i>Staurastrum gladiosum</i>																
<i>Staurastrum hystrix</i>																
<i>Staurastrum longibranchiatum</i>																
<i>Staurastrum lunatum</i>																
<i>Staurastrum manfeldtii</i>																
<i>Staurastrum pachyrhynchum</i>															P	
<i>Staurastrum pilosum</i>																
<i>Staurastrum proboscidium</i>																
<i>Staurastrum rhabdophorum</i>																
<i>Staurastrum subcruciatum</i>																
<i>Staurastrum tetracerum</i>	P												P	P		
<i>Staurastrum varians</i>																
<i>Staurastrum triangularis</i>																
<i>Stigeoclonium</i> sp.																
<i>Tetalingia granulata</i>	275	P	530	268	153	81	22	21	44	42	14				111	111
<i>Tetraedron tumidulum</i>	138		P	46	46			21		5	5			332		
<i>Tetraedron limneticum</i>																
<i>Tetraedron lobulatum</i>																
<i>Tetraedron minimum</i>	P	213	132	115	62										697	232
<i>Tetraedron muticum</i>	138			46	46											
<i>Tetraedron arthrodesmiforme</i>								21		5	5					
<i>Tetraedron caudatum</i>															P	
<i>Tetraedron trigonum</i>																
<i>Trochiscia granulata</i>												273	784	268	442	171
<i>Xanthidium antilopaeum</i>																
<i>Xanthidium subhastiferum</i> v. <i>murrayi</i>																
<i>Zygnema</i> sp.	P		397	132	132		33	295	149	119	67	1743	P	P	581	581
CYANOPHYTA (Cyanobacteria)																
<i>Agmenellum quadruplicatum</i>																
<i>Agmenellum thermale</i>	1101	P	3177	1426	931							9064	3972	20659	11232	4938
<i>Anabaena</i> sp.	4679	1281	94	2018	1374	P						2654	5491	2715	1585	1585
<i>Anabaena lapponica</i>												13596	19726	8984	14102	3111
<i>Anabaena planctonica</i>																
<i>Anacystis dimidiata</i>			P			41				10	10	5229	P	P	1743	1743
<i>Anacystis marina</i>																
<i>Anacystis montana</i>	19404	50586	4766	24919	13511							17222			5741	5741
<i>Anacystis thermalis</i>															24826	18208
<i>Aphanocapsa elachista</i>	3028	11526		4851	3450	630	22	612		159	151			14166	60312	24826
<i>Aphanocapsa elachista</i> v. <i>planctonica</i>				1236	1236		667	P	1167	616	239					
<i>Aphanothece clathrata</i>		2988		996	996	793		2637	572	802	626	46716	51096	72165	56659	7855
<i>Chlorogloea microcystoides</i>										198	198	3486	794	349	1543	980
<i>Chroococcus turgidus</i>	1376	2134	1854	1788	221								2615	6624	3080	1926
<i>Coccochloris aeruginosa</i>																
<i>Coelosphaerium kuetzingianum</i>																
<i>Dactylococcopsis linearis</i>						81				20	20					
<i>Desmonema wrangellii</i>	2064	110350	P	37471	36444							43229	19064	16734	26342	8470
<i>Dichothrix gypsophila</i>	1101	6830	13901	7277	3702	1057	6278	11213	7795	6586	2112		1589		530	530
<i>Gloeothece linearis</i> v. <i>composite</i>	1651	2347	265	1421	612							P		2789	930	930
<i>Gomphosphaeria lacustris</i>		P	17475	5825	5825							192441		27541	73327	60085
<i>Lyngbya birgei</i>																
<i>Lyngbya contorta</i>																
<i>Microcoleus vaginatus</i>			P									P	P			
<i>Microcystis flos-aquae</i>	10459	P		3486	3486	1342	P			336	336	117487	94791	89597	100625	8563
<i>Nostoc commune</i>	P	P					108	6565	484	1789	1595			57048	19016	19016
<i>Oncobrysa cesatii</i>																
<i>Oscillatoria</i> sp.																
<i>Oscillatoria limosa</i>	P															
<i>Pseudanabaena</i> sp.							P	323	P	81	81					
<i>Schizogonium murale</i>																
<i>Schizothrix calcicola</i>	172569	157308	112796	147558	17930	8233	22060	16160	29262	18929	4460	361524	143642	313414	272860	66085
<i>Scopulonema minus</i>						142				36	36					
<i>Stigonema mammosum</i>																
Unidentified Cyanophyte akinete																
Total Algal Density (No. cells/cm²)	282044	410967	219993	304335	56245	15267	34979	43947	45861	35013	6996	875973	418207	766949	687043	138053

^a P = present, but not encountered during routine cell counts; SE = standard error.

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	A8						B2											
	July 1998						July 1997											
	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	
BACILLARIOPHYTA (Diatoms)																		
<i>Achnanthes detha</i>																		
<i>Achnanthes flexella</i>	P	310	P	P	78	78	P	261	P	87	87	P		P	P			
<i>Achnanthes lanceolata</i>																		
<i>Achnanthes minutissima</i>		10279	7313	11008	7150	2514	21309	47195	55376	41293	10267	5908	2546	4761	4539	4439	699	
<i>Achnanthes minutissima v. cryptocephala</i>	7395	3719	4896	3091	4775	950	1307		P	436	436	422	61	336	190	252	80	
<i>Amphipleura</i> sp.																		
<i>Amphora</i> sp.	P	P	P															
<i>Amphora ovalis</i>																		
<i>Amphora ovalis v. pediculus</i>																		
<i>Anomoeoneis</i> sp.																		
<i>Anomoeoneis vitrea</i>				P														
<i>Asterionella formosa</i>																		
<i>Caloneis</i> sp.	1381	849	147	1546	981	315								334	P	84	84	
<i>Caloneis ventricosa</i>			P															
<i>Caloneis ventricosa v. truncatula</i>																		
<i>Cocconeis diminuta</i>																		
<i>Cocconeis pediculus</i>				P														
<i>Cocconeis placentula</i>																		
<i>Cocconeis placentula v. euglypta</i>																		
<i>Cocconeis</i> sp.				P					P									
<i>Coscinodiscus denarius</i>				P														
<i>Coscinodiscus lacustris</i>				P														
<i>Cyclotella</i> sp.				P					P									
<i>Cyclotella antiqua</i>	356	P	709	798	466	182												
<i>Cyclotella comta</i>																		
<i>Cyclotella glomerata</i>	P	P	P															
<i>Cyclotella kuzingiana</i>																		
<i>Cyclotella meneghiniana</i>																		
<i>Cyclotella ocellata</i>																		
<i>Cyclotella striata</i>				P			P	P										
<i>Cymbella affinis</i>	3532	775	248	976	1383	733												
<i>Cymbella amphioxys</i>							261	P	P	87	87							
<i>Cymbella aspera</i>																		
<i>Cymbella cistula</i>				P														
<i>Cymbella cuspidata</i>																		
<i>Cymbella cymbiformis</i>	P	P																
<i>Cymbella cymbiformis v. nonpunctata</i>																		
<i>Cymbella gracilis</i>	P	1085	930	P	504	293	523	2353	726	1201	579	P	P	P	P			
<i>Cymbella lanceolata</i>																		
<i>Cymbella mexicanum v. janischii</i>																		
<i>Cymbella minuta</i>	1069	P	P	236	326	254	3660	3269	2440	3123	360	422	561	269	488	435	62	
<i>Cymbella naviculiformis</i>															P			
<i>Cymbella sinuata</i>																		
<i>Cymbella tumida</i>																		
<i>Cymbella turgida</i>							1307	407	349	688	310							
<i>Cymbella turgidula</i>							P	P	P									
<i>Cymbella</i> sp.							261	P	349	203	105		470	368	698	384	145	
<i>Denticula tenuis</i>	1425	930	744	3213	1578	564	P	654	1046	567	305	153	P	P	163	79	46	
<i>Diatoma elongatum</i>		310	1735	1302	837	408	5164	17549	9472	10728	3630	633	667	756	334	597	92	
<i>Diatoma vulgare</i>				P														
<i>Didymosphenia geminata</i>																		
<i>Diploneis</i> sp.																		
<i>Diploneis elliptica</i>																		
<i>Diploneis finnica</i>																		
<i>Diploneis interrupta</i>																		
<i>Diploneis ovalis</i>																		
<i>Epithemia sorex</i>	P	620	496	P	279	163	1925	1046	1888	1620	287	102	P	261	488	213	106	
<i>Eunotia arcus</i>																		
<i>Eunotia exigua</i>																		
<i>Eunotia flexuosa</i>																		
<i>Eunotia glacialis</i>				P														
<i>Eunotia maior</i>																		
<i>Eunotia papillo</i>																		
<i>Eunotia praeurpta</i>	P	P	P	P														
<i>Eunotia praeurpta v. bidens</i>																		
<i>Eunotia sudetica</i>																		
<i>Eunotia</i> sp.																		
<i>Fragilaria brevistriata</i>																		
<i>Fragilaria construens</i>		P		3905	976	976												
<i>Fragilaria crotonensis</i>	2872	P	3817		1672	985	523	784	P	436	230	211	P	269	P	120	70	
<i>Fragilaria intermedia</i>																		
<i>Fragilaria pinnata</i>	P	P		P														
<i>Frustulia vulgaris</i>																		
<i>Gomphonema</i> sp.																		
<i>Gomphonema acuminatum</i>																		
<i>Gomphonema acuminatum v. coronata</i>				3582	896	896												
<i>Gomphonema angustatum</i>	P	P	P															
<i>Gomphonema constrictum</i>																		
<i>Gomphonema gracile</i>	4455	P	P	236	1173	1095												
<i>Gomphonema intricatum v. vibrio</i>																		
<i>Gomphonema olivaceum</i>				P														
<i>Gomphonema parvulum</i>																		
<i>Gyrosigma</i> sp.																		
<i>Hantzschia amphioxys</i>																		
<i>Melosira</i> sp.																		
<i>Melosira granulata</i>																		
<i>Meridion circulare</i>																		
<i>Navicula</i> sp.		P																
<i>Navicula amphibola</i>																		
<i>Navicula anglica</i>																		
<i>Navicula aspera</i>																		
<i>Navicula bacillum</i>																		
<i>Navicula decussis</i>																		
<i>Navicula dolosa</i>																		
<i>Navicula capitata</i>																		
<i>Navicula cryptocephala</i>	6176	14540	9049	14128	10973	2029	1896	1961	1046	1634	295	587	76	196	553	353	128	
<i>Navicula cryptocephala v. intermedia</i>							784	3530	2789	2368	820							
<i>Navicula cuspidata</i>																		

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	A8						B2											
	July 1998						July 1997					July 1998						
	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	
<i>Navicula exigua</i>								P	P									
<i>Navicula exigua v. capitata</i>																		
<i>Navicula lacustris</i>																		P
<i>Navicula laevis</i>																		
<i>Navicula lanceolata</i>			620	1302	480	310						633	288	538	342	450	81	
<i>Navicula mutica</i>																		
<i>Navicula placenta</i>																		
<i>Navicula pseudoscutiformis</i>																		
<i>Navicula pupula</i>		P	P	P				P	P			P		P	P			
<i>Navicula radiosa</i>								2223	784	1394	1467	417	396	121	57	144	88	
<i>Navicula reinhardtii</i>																		
<i>Navicula rhynchocephala</i>																		
<i>Navicula tripunctata</i>																		
<i>Navicula tripunctata v. schizonemoides</i>																		
<i>Navicula viridula</i>	4211	201	P	1409	1455	970						P		P	490	123	123	
<i>Nedium sp.</i>															P			
<i>Nedium bisulcatum</i>																		
<i>Nedium dubium</i>																		
<i>Nedium hitchcockii</i>																		
<i>Nedium iridis v. amphigomphus</i>								P										
<i>Nitzschia sp.</i>																		
<i>Nitzschia acicularis</i>																		
<i>Nitzschia amphibia</i>									P									
<i>Nitzschia angustata</i>	P	P							P				P					
<i>Nitzschia dissipata</i>																		
<i>Nitzschia filiformis</i>	802		248	325	344	168	915	523	697	712	113	P	243	302	P	136	80	
<i>Nitzschia fonticola</i>		P	P				1307	3661	2440	2469	680	P		P				
<i>Nitzschia palea</i>												P						
<i>Nitzschia sigmoidea</i>		P		P											P	P		
<i>Pinnularia sp.</i>								P							P			
<i>Pinnularia biceps</i>									P									
<i>Pinnularia borealis</i>																		
<i>Pinnularia maior</i>																		
<i>Pinnularia mesolepta</i>		P	P											P	P			
<i>Pinnularia nodosa</i>																		
<i>Pinnularia streptoraphe</i>																		
<i>Pinnularia viridis</i>																		
<i>Rhizosolenia longiseta</i>																		
<i>Rhoicosphenia curvata</i>																		
<i>Rhopalodia gibba</i>	P	P	P	P									P		65	P	16	16
<i>Rhopalodia gibberula</i>																		
<i>Stauroneis anceps</i>	P			P					P				P		P			
<i>Stauroneis phoenicenteron</i>																		
<i>Stauroneis smithii</i>																		
<i>Stauroneis sp.</i>																		
<i>Stephanodiscus astraea</i>																		
<i>Suirella sp.</i>													284	P		P	71	71
<i>Suirella angustata</i>																		
<i>Synedra actinastroides</i>	15603	10589	3637	13207	10759	2585	14163	18131	8311	13535	2852	6457	2334	18468	6505	8441	3482	
<i>Synedra acus</i>	668	P	3471	976	1279	759			P				121	202		81	49	
<i>Synedra sp.</i>																		
<i>Synedra ulna</i>	312	P	124	P	109	74	P	P				85	30	403	P	130	93	
<i>Tabellaria fenestrata</i>	2394	179	372	325	818	527	P	119	349	156	102	817	227	130	98	318	169	
<i>Tabellaria flocculosa</i>	1425	805	2479	2007	1679	362	7800	20525	7670	11998	4263	5695	917	1337	911	2215	1164	
CRYPTOPHYTA (Cryptomonads)																		
<i>Cryptomonas curvata</i>																		
<i>Cryptomonas erosa</i>																		
<i>Cryptomonas ovata</i>																		
<i>Cryptomonas reflexa</i>	P						145	P	P	48	48							
<i>Katablepharis ovalis</i>																		
<i>Rhodomonas minuta</i>																		
CHRYSOPHYTA (Golden-Brown Algae)																		
<i>Chrysiasterum catenatum</i>																		
<i>Chrysococcus sp.</i>																		
<i>Chrysoikoides sp.</i>																		
<i>Chrysophaerella rodheii</i>																		
<i>Dinobryon crenulatum</i>																		
<i>Dinobryon divergens</i>	1069	P	P		267	267						511		130	293	233	110	
<i>Dinobryon sertularia</i>	1425	1240	248	325	810	305	P					211		P	98	77	50	
<i>Dinobryon sertularia v. protuberans</i>	3742	2169	3967	3254	3283	400		136	P	45	45	306		261	392	240	84	
<i>Dinobryon sociale</i>	4900	2479	3595	1302	3069	769	P							134		34	34	
<i>Dinobryon tabellariae</i>		P	P															
<i>Ishtmochloron trispinatum</i>								P				306	P	134	P	110	73	
<i>Kephyrion sp.</i>												P						
<i>Kephyrion boreale</i>	356		248		151	90						211			380	148	92	
<i>Ochromonas spa</i>															P			
<i>Ochromonas stellaris</i>																		
<i>Ophiocytium sp.</i>				P			P	P	388	129	129							
<i>Pseudokephyrion sp.</i>																		
<i>Stichogloeia doederleinii</i>												P	60	P		15	15	
<i>Synura sp.</i>																		
Unidentified statospore	3564	310	744	3254	1968	839	784	523	P	436	230	211		130	683	256	149	
PYRROPHYTA (Dinoflagellates)																		
<i>Glenodinium sp.</i>																		
<i>Gymnodinium sp.</i>																		
<i>Gymnodinium uberrimum</i>	P	358	P	325	171	99	86	261	349	232	77							
<i>Peridinium sp.</i>		P					P	P	P							P		
<i>Peridinium aciculiferum</i>	P	P	147		37	37	261	261	194	239	22	P	P	P	190	48	48	
<i>Peridinium cinctum</i>	P	P	P	P											P			
<i>Peridinium palatinum</i>		P	P															
<i>Peridinium palustre</i>									P									
<i>Peridinium willei</i>																		
Unidentified cyst							261	136	P	132	75	664		P		166	166	
EUGLENOPHYTA (Euglenoids)																		
<i>Euglena sp.</i>																		
<i>Phacus sp.</i>	P																	
<i>Trachelomonas sp.</i>		P	P															

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	A8						B2											
	July 1998						July 1997					July 1998						
	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	
CHLOROPHYTA (Green Algae)																		
<i>Actinotaenium</i> sp.																		
<i>Ankistrodesmus convolutus</i>							P											
<i>Ankistrodesmus falcatus</i>							P		349	116	116				P			
<i>Ankistrodesmus falcatus</i> v. <i>spiralis</i>	1067	930	600	1952	1137	289	1046	1046	697	930	116	844	P	403	P	312	201	
<i>Ankistrodesmus gelifacius</i>																		
<i>Arthrodesmus triangularis</i>		P	P															
<i>Binuclearia</i> sp.	P																	
<i>Botryococcus</i> sp.		P																
<i>Bulbochaete</i> sp.	P	89	P	1417	376	347	2542	272	3486	2100	954	422	P	134	P	139	99	
<i>Chlamydomonas</i> sp. a																		
<i>Chlamydomonas</i> sp. b																		
<i>Closterium</i> sp.	P	P	P	237	59	59	P	P	349	116	116							
<i>Closterium acerosum</i>																		
<i>Closterium actum</i>																		
<i>Closterium dianae</i>																		
<i>Closterium pseudolunula</i>																		
<i>Closterium rostratum</i>																		
<i>Coeloastrum</i> sp.			P															
<i>Coeloastrum cambricum</i>																		
<i>Coeloastrum microporum</i>			P										P	457		114	114	
<i>Coeloastrum printzii</i>								261		87	87				P			
<i>Coeloastrum sphaericum</i>	P	P		P											P			
<i>Cosmarium</i> sp.	356				89	89												
<i>Cosmarium anceps</i>																		
<i>Cosmarium biculatum</i>																		
<i>Cosmarium botrytis</i>																		
<i>Cosmarium capitulum</i> v. <i>groenlandicum</i>																		
<i>Cosmarium contracta</i>																		
<i>Cosmarium coronatum</i>																		
<i>Cosmarium depressum</i>																		
<i>Cosmarium granulatum</i>	445		P	651	274	164	P	522	194	239	152							
<i>Cosmarium holmiense</i> v. <i>intermedium</i>										116	116	P	P	130	P	33	33	
<i>Cosmarium humile</i> v. <i>lacustre</i>			P	472	118	118	131	261	P	44	44	204	P	P	73	51	51	
<i>Cosmarium impressulum</i> v. <i>suborthogonum</i>	928		P	P	232	232			P	87	87			65	P	35	20	
<i>Cosmarium laeve</i>									P									
<i>Cosmarium norimbergense</i>	P	P	P				P	P	P									
<i>Cosmarium phaseolus</i> v. <i>phaseolus</i>		P	147	976	281	234						422				106	106	
<i>Cosmarium pokomyanum</i>												P		403	488	223	130	
<i>Cosmarium pseudoprotuberans</i>																		
<i>Cosmarium rectangulare</i>	P	P	P					437	P	146	146	P	P	P	98	24	24	
<i>Cosmarium rectangulum</i>	713	P		P	178	178						P	P	P				
<i>Cosmarium reniforme</i>				P														
<i>Cosmarium repandum</i>																		
<i>Cosmarium septentrionale</i>	P	P	P	P								153	121	P	293	142	60	
<i>Cosmarium speciosum</i>		P						340	711	350	205	P	P	P				
<i>Cosmarium subgranatum</i>			310		78	78												
<i>Cosmarium tetraophthalmum</i>		P					P	136	324	153	94							
<i>Cosmarium turpinii</i>	P		P	P														
<i>Cosmarium turpinii</i> v. <i>podolicum</i>																		
<i>Crucigenia apiculata</i>																		
<i>Crucigenia quadrata</i>																		
<i>Crucigenia rectangularis</i>			P															
<i>Cylindrocapsa brebissonii</i>	1069	P	P	1181	562	326	1394	523	1046	988	253	204	61	326	191	195	54	
<i>Desmidiium swartzii</i> v. <i>quadrangulatum</i>																		
<i>Dictyosphaerium pulchellum</i>							P											
<i>Elakatothrix</i> sp.	356	310	248		229	79		P	P					P	P			
<i>Euastropsis richteri</i>																		
<i>Euastrum</i> sp.																		
<i>Euastrum bidentatum</i>	P	P	P	P														
<i>Euastrum denticulatum</i>																		
<i>Euastrum dubium</i> v. <i>maius</i>	356	P	248	413	254	91	P	P	P			P	P	P	P			
<i>Euastrum elegans</i>		P	P	443	111	111	261	P		87	87	P	P	P	P			
<i>Euastrum gemmatum</i>	P																	
<i>Euastrum insulare</i> v. <i>silesiacum</i>	P																	
<i>Euastrum obesum</i>																		
<i>Euastrum ohioense</i>																		
<i>Euastrum sinosum</i>																		
<i>Euastrum verrucosum</i>														65		16	16	
<i>Gemellistocystis neglecta</i>																		
<i>Geminella interrupta</i>							P		P									
<i>Gloeocystis schroeteri</i>	11404				2851	2851	3922	7060	23009	11330	5909	P		672	P	168	168	
<i>Gloeotila pelagica</i>																		
<i>Golenkinia radiata</i> v. <i>brevispina</i>																		
<i>Gonatozygon brebissonii</i>	P		P									P		P				
<i>Gonatozygon monotaenium</i>				P														
<i>Hyalotheca</i> sp.																		
<i>Kirchneriella</i> sp.	356				89	89	523	523	1046	697	174	P			570	143	143	
<i>Koliella longiseta</i>																		
<i>Lagerheimia subsalsa</i>																		
<i>Lagerheimia wratislawiensis</i>																		
<i>Micractinium pusillum</i>																		
<i>Monoraphidium</i> sp.			248		62	62												
<i>Mougeotia</i> sp. a	538	P	P	325	216	132	131	P	P	44	44	580	P	P	537	279	161	
<i>Nephrocotium limneticum</i>			P	1302	325	325		P	P									
<i>Ooedogonium</i> sp.																		
<i>Oocystis elliptica</i>							2092	850	697	1213	442	211		134		86	52	
<i>Oocystis lacustris</i>		8057	8057	9761	6469	2193	10721	11243	10110	10691	327	3587	424	403	2440	1714	786	
<i>Oocystis solitaria</i>	P	1132			283	283												
<i>Oonephris obesa</i>	6787		496	236	1880	1639			P			P	61			15	15	
<i>Quadrigula closterioides</i>																		
<i>Phacotus</i> sp.	713				178	178												
<i>Pandorina morum</i>														61		15	15	
<i>Pediastrum boryanum</i>								P	P	P								
<i>Pediastrum boryanum</i> v. <i>ellesmerense</i>									P									
<i>Pediastrum duplex</i>															P			
<i>Pediastrum duplex</i> v. <i>clathratum</i>															P			
<i>Pediastrum integrum</i> v. <i>scutum</i>																2855	714	714
<i>Pediastrum tetras</i>							P	P	P			1688	485	1277	P	863	381	

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	A8						B2										
	July 1998						July 1997					July 1998					
	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Mean	SE
<i>Penium</i> sp.							P										
<i>Penium margaritaceum</i>																	
<i>Pleurotaenium</i> sp.																	
<i>Pleurotaenium trabecula</i>																	
<i>Protoderma</i> sp.																	
<i>Scenedesmus bijuga</i>							1307	2092	697	1365	404						
<i>Scenedesmus acuminatus</i>							P	P						P	P		
<i>Scenedesmus arcuatus</i>							8891	P	8522	5804	2904						
<i>Scenedesmus denticulatis</i>																	
<i>Scenedesmus ecomis</i>																	
<i>Scenedesmus incrasatulus</i>	713	1240	1240	P	798	294	1830			610	610	664	P	P		166	166
<i>Scenedesmus obliquus</i>																	
<i>Scenedesmus quadricauda</i>							6537	1046	4261	3948	1593	211			P	53	53
<i>Scenedesmus spinosus</i>																	
<i>Scenedesmus wisconsinensis</i>																	
<i>Spirogyra</i> sp.																	
<i>Staurastrum</i> sp. a	P	P		P			P	136	P	45	45	P		65	P	16	16
<i>Staurastrum</i> sp. b																	
<i>Staurastrum</i> sp. c																	
<i>Staurastrum anatinum</i> v. <i>biradiatum</i>																	
<i>Staurastrum antilopaeum</i>																	
<i>Staurastrum anatinum</i>																	
<i>Staurastrum apiculatum</i>				325	81	81		P									
<i>Staurastrum borgeanum</i>	P	89	P	P	22	22	145		349	165	101	102	61	P		41	25
<i>Staurastrum brebissonii</i>				P													
<i>Staurastrum clevei</i>																	
<i>Staurastrum curvatum</i>																	
<i>Staurastrum cuspidatum</i>																	
<i>Staurastrum dejectum</i>	P	P															
<i>Staurastrum furcigerum</i>									261	P	87	87	P	P	P		
<i>Staurastrum gladiusum</i>																	
<i>Staurastrum hystrix</i>							P										
<i>Staurastrum longibranchiatum</i>																	
<i>Staurastrum lunatum</i>																	
<i>Staurastrum manfeldtii</i>																	
<i>Staurastrum pachyrhynchum</i>	P	P	P					P									
<i>Staurastrum pilosum</i>							196			65	65						
<i>Staurastrum proboscidioidum</i>							P		697	232	232						
<i>Staurastrum rhabdophorum</i>																	
<i>Staurastrum subcruciatum</i>							261	523		261	151				P		
<i>Staurastrum tetracerum</i>																	
<i>Staurastrum varians</i>				P	P		P										
<i>Staurastrum triangularis</i>								P									
<i>Stigeoclonium</i> sp.																	
<i>Teilingia granulata</i>	356	930	1487		693	327	784	261	697	581	162	409	61	326		199	100
<i>Tetraedron tumidulum</i>	P		P														
<i>Tetraedron limneticum</i>																	
<i>Tetraedron lobulatum</i>																	
<i>Tetraedron minimum</i>	356	310	248	325	310	23	1046	261		436	314	211	P	134	190	134	47
<i>Tetraedron muticum</i>	239	310		P	137	81									190	48	48
<i>Tetraedron arthodesmiforme</i>			248		62	62											
<i>Tetraedron caudatum</i>							261		P	87	87	P					
<i>Tetraedron trigonum</i>																	
<i>Trochiscia granulata</i>							P										
<i>Xanthidium antilopaeum</i>																	
<i>Xanthidium subhastiferum</i> v. <i>murrayi</i>																	
<i>Zygnema</i> sp.	957			P	239	239	690	P	P	230	230						
CYANOPHYTA (Cyanobacteria)																	
<i>Agmenellum quadruplicatum</i>		P					P	P	P				849			212	212
<i>Agmenellum thermale</i>		40285	3471	106400	37539	24697	8368	P		2789	2789	P	212		P	53	53
<i>Anabaena</i> sp.	P	P	P	5206	1302	1302			6972	2324	2324			P			
<i>Anabaena lapponica</i>																	
<i>Anabaena planctonica</i>																	
<i>Anacystis dimidiata</i>	P		P	P				P	968	323	323	121				30	30
<i>Anacystis marina</i>																	
<i>Anacystis montana</i>								10720		3573	3573				4295	1074	1074
<i>Anacystis thermalis</i>	60583				15146	15146		1046	12008	4351	3840			3898		975	975
<i>Aphanocapsa elachista</i>															26622	6656	6656
<i>Aphanocapsa elachista</i> v. <i>planctonica</i>	38488	68176	58755	141211	76658	22391		P	20569	6856	6856	56762	1213	22984		20240	13270
<i>Aphanothece clathrata</i>																	
<i>Chlorogloea microcystoides</i>								P									
<i>Chroococcus turgidus</i>								1046	697	581	307						
<i>Coccolithis aeruginosa</i>		1240	1487		682	397											
<i>Coelosphaerium kuetzingianum</i>																	
<i>Dactylococopsis linearis</i>	1425	715	1240	3254	1658	553						1430		134		391	348
<i>Desmonema wrangellii</i>																	
<i>Dichothrix gypsophila</i>	35994	109701	50822	142192	84677	24917	2092	3138	11853	5694	3094	22472	10004	15755	62327	27640	11840
<i>Gloeothece linearis</i> v. <i>composite</i>																	
<i>Gomphosphaeria lacustris</i>	32073	7151	4958	62474	26664	13427	3138	35560	10846	16515	9779	26376		1747	P	7031	6462
<i>Lyngbya birgei</i>																	
<i>Lyngbya contorta</i>																	
<i>Microcoleus vaginatus</i>				2928	732	732	P	P						718	P	180	180
<i>Microcystis flos-aquae</i>				P			P	14642	85413	33352	26372			18920		4730	4730
<i>Nostoc commune</i>	P	6198	P	137920	36030	33995	P	1902	14642	5515	4597	6330	364	739	1171	2151	1403
<i>Oncobyrsa cesatii</i>																	
<i>Oscillatoria</i> sp.																	
<i>Oscillatoria limosa</i>																	
<i>Pseudanabaena</i> sp.		P															
<i>Schizogonium murale</i>																	
<i>Schizothrix calcicola</i>	338553	171988	240909	721374	368206	122581	270620	215450	315505	267192	28934	154670	15036	84006	266223	129984	53617
<i>Scopulonema minus</i>	49179	107221	100156	42137	74673	16875						1899	546	3091		1384	695
<i>Stigonema mammosum</i>				P					P								
Unidentified Cyanophyte akinete																	
Total Algal Density (No. cells/cm²)	653136	578129	525049	1457477	803448	219587	413444	452622	639062	501709	69601	305338	39774	187226	387833	230043	75610

P = present, but not encountered during routine cell counts; SE = standard error.

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	B5										B7				
	July 1997					July 1998					July 1997				
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE
BACILLARIOPHYTA (Diatoms)															
<i>Achnanthes detha</i>	3905	1376	2582	2621	730										
<i>Achnanthes flexella</i>	P	P	P			P	P	P			118	349	P	156	102
<i>Achnanthes lanceolata</i>						P	P								
<i>Achnanthes minutissima</i>	68052	30550	47129	48577	10850	35577	67494	41161	48077	9841	27368	20917	27935	25407	2251
<i>Achnanthes minutissima v. cryptocephala</i>	1116		516	544	322	325	1023	P	449	302	1830	1046	784	1220	314
<i>Amphipleura</i> sp.															
<i>Amphora</i> sp.						325			108	108					
<i>Amphora ovalis</i>	P	P	P			P	P					P			
<i>Amphora ovalis v. pediculus</i>															
<i>Anomoeoneis</i> sp.															
<i>Anomoeoneis vitrea</i>	P	P									P	1164		388	388
<i>Asterionella formosa</i>															
<i>Caloneis</i> sp.															
<i>Caloneis ventricosa</i>						P	P	P							
<i>Caloneis ventricosa v. truncatula</i>											P		P		
<i>Cocconeis diminuta</i>															
<i>Cocconeis pediculus</i>															
<i>Cocconeis placentula</i>															
<i>Cocconeis placentula v. euglypta</i>															
<i>Cocconeis</i> sp.	P	P	P												
<i>Coscinodiscus denarius</i>															
<i>Coscinodiscus lacustris</i>															
<i>Cyclotella</i> sp.	P														
<i>Cyclotella antiqua</i>	558	275	P	278	161	651	P	732	461	232	915	P	1394	523	944
<i>Cyclotella comta</i>											P				
<i>Cyclotella glomerata</i>															
<i>Cyclotella kutzingiana</i>			P												
<i>Cyclotella meneghiniana</i>															
<i>Cyclotella ocellata</i>															
<i>Cyclotella striata</i>	P		P			P	192	P	64	64					
<i>Cymbella affinis</i>						651	P	P	217	217					
<i>Cymbella amphioxys</i>															
<i>Cymbella aspera</i>															
<i>Cymbella cistula</i>															
<i>Cymbella cuspidata</i>															
<i>Cymbella cymbiformis</i>		550		183	183						P	P			
<i>Cymbella cymbiformis v. nonpunctata</i>	P		317	106	106						1700	697	1307	1235	292
<i>Cymbella gracilis</i>															
<i>Cymbella lanceolata</i>															
<i>Cymbella mexicanum v. janischii</i>															
<i>Cymbella minuta</i>	558	275	2324	1052	641	2603	1023	976	1534	535	2092	349	784	1075	524
<i>Cymbella naviculiformis</i>															
<i>Cymbella sinuata</i>															
<i>Cymbella tumida</i>															
<i>Cymbella turgida</i>	558	P	P	186	186										
<i>Cymbella turgidula</i>															
<i>Cymbella</i> sp.	P	275	P	92	92	325	1023	407	585	220	P	349	P	116	116
<i>Denticula tenuis</i>	P	P	P			P	341	P	114	114	3334	1046	2484	2288	668
<i>Diatoma elongatum</i>	6975	5139	774	4296	1839	10198	12272	8242	10237	1164	523	523	654	567	44
<i>Diatoma vulgare</i>															
<i>Didymosphenia geminata</i>															
<i>Diploneis</i> sp.															
<i>Diploneis elliptica</i>	P					P					P	P			
<i>Diploneis finnica</i>															
<i>Diploneis interrupta</i>															
<i>Diploneis ovalis</i>															
<i>Epithemia sorex</i>	290	P	258	183	92	1126	1854	2414	1798	373	2301	4881	3138	3440	760
<i>Eunotia arcus</i>															
<i>Eunotia exigua</i>															
<i>Eunotia flexuosa</i>															
<i>Eunotia glacialis</i>															
<i>Eunotia maior</i>															
<i>Eunotia papilio</i>															
<i>Eunotia praerupta</i>	P	P	516	172	172	P	P	218	73	73	P	P	P		
<i>Eunotia praerupta v. bidens</i>															
<i>Eunotia sudetica</i>															
<i>Eunotia</i> sp.	P					1627			542	542					
<i>Fragilaria brevistriata</i>															
<i>Fragilaria construens</i>						P	P	1302	434	434					
<i>Fragilaria crotonensis</i>	3347	P	P	1116	1116	2065	P	2887	1651	859	705	697	654	685	16
<i>Fragilaria intermedia</i>															
<i>Fragilaria pinnata</i>	1739	2202	1808	1916	144	P	2727	3905	2211	1156	P	P	3399	1133	1133
<i>Frustulia vulgaris</i>															
<i>Gomphonema</i> sp.															
<i>Gomphonema acuminatum</i>															
<i>Gomphonema acuminatum v. coronata</i>		P									1569			523	523
<i>Gomphonema angustatum</i>	P	P	P			651	341	P	331	188	P	P	1046	349	349
<i>Gomphonema constrictum</i>	P	P	P											407	407
<i>Gomphonema gracile</i>						2222	P	P	741	741					
<i>Gomphonema intricatum v. vibrio</i>															
<i>Gomphonema olivaceum</i>						P			412	412					
<i>Gomphonema parvulum</i>															
<i>Gyrosigma</i> sp.															
<i>Hantzschia amphioxys</i>															
<i>Melosira</i> sp.															
<i>Melosira granulata</i>															
<i>Meridion circulare</i>															
<i>Navicula</i> sp.															
<i>Navicula amphibola</i>											P		P		
<i>Navicula anglica</i>						P	P	P							
<i>Navicula aspera</i>															
<i>Navicula bacillum</i>															
<i>Navicula decussis</i>															
<i>Navicula dolosa</i>															
<i>Navicula capitata</i>															
<i>Navicula cryptocephala</i>	558	P	516	358	179	1302	341	3708	1784	1001	1307	2207	4882	2799	1074
<i>Navicula cryptocephala v. intermedia</i>		4335	1291	1875	1285						7202	12856	6691	8916	1975
<i>Navicula cuspidata</i>															

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	B5										B7				
	July 1997					July 1998					July 1997				
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE
<i>Navicula exigua</i>	P	P													
<i>Navicula exigua</i> v. <i>capitata</i>															
<i>Navicula lacustris</i>															
<i>Navicula laevisima</i>		P	P												
<i>Navicula lanceolata</i>						P	2003	P	668	668					
<i>Navicula mutica</i>						P	P	P							
<i>Navicula placenta</i>															
<i>Navicula pseudocutiformis</i>		P				P									
<i>Navicula pupula</i>	P		P			P	P	P				P			
<i>Navicula radiosa</i>	9203	716	634	3518	2843	313	P	P	104	104	2353	2776	261	1797	777
<i>Navicula reinhardtii</i>															
<i>Navicula rhynchocephala</i>															
<i>Navicula tripunctata</i>								4067	1356	1356					
<i>Navicula tripunctata</i> v. <i>schizonemoides</i>								P							
<i>Navicula viridula</i>						P	682	1627	770	472					
<i>Nedium</i> sp.													P		
<i>Nedium bisulcatum</i>															
<i>Nedium dubium</i>															
<i>Nedium hitchcockii</i>															
<i>Nedium iridis</i> v. <i>amphigomphus</i>											P				
<i>Nitzschia</i> sp.															
<i>Nitzschia acicularis</i>								P							
<i>Nitzschia amphibia</i>							P					P	P		
<i>Nitzschia angustata</i>	P		P								P		P		
<i>Nitzschia dissipata</i>															
<i>Nitzschia filiformis</i>	P	P				325	341	325	330	5		2005	1046	1017	579
<i>Nitzschia fonticola</i>						P	P				P	3486	1046	1511	1033
<i>Nitzschia palea</i>							P	P			P				
<i>Nitzschia sigmoidea</i>			P								P				
<i>Pinnularia</i> sp.	P		P			P	P				P	1394	P	465	465
<i>Pinnularia biceps</i>	P		P												
<i>Pinnularia borealis</i>															
<i>Pinnularia maior</i>															
<i>Pinnularia mesolepta</i>						P	P	P							
<i>Pinnularia nodosa</i>		P													
<i>Pinnularia streptoraphe</i>															
<i>Pinnularia viridis</i>															
<i>Rhizosolenia longiseta</i>															
<i>Rhoicosphenia curvata</i>															
<i>Rhopalodia gibba</i>	P						P	P			103	P	P	34	34
<i>Rhopa;pdoa gebberula</i>															
<i>Stauroneis anceps</i>		P	P				P	P				P			
<i>Stauroneis phoenicenteron</i>	P		P												
<i>Stauroneis smithii</i>	P						P								
<i>Stauroneis</i> sp.															
<i>Stephanodiscus astraea</i>							P	P			P				
<i>Surirella</i> sp.								P							
<i>Surirella angustata</i>								P							
<i>Synedra actinastroides</i>	8646	5689	5229	6521	1071	21612	40596	22465	28224	6191	10641	9069	6058	8589	1345
<i>Synedra acus</i>			P												
<i>Synedra</i> sp.															
<i>Synedra ulna</i>	P		P			P	P	163	54	54	P	234	P	78	78
<i>Tabellaria fenestrata</i>	580	P	P	193	193	2675	4176	5532	4128	825	118	P	850	323	266
<i>Tabellaria flocculosa</i>	2007	P	1291	1099	587	13938	9922	15212	13024	1594	646	2963	1830	1813	669
CRYPTOPHYTA (Cryptomonads)															
<i>Cryptomonas curvata</i>															
<i>Cryptomonas erosa</i>															
<i>Cryptomonas ovata</i>						P	P	825	275	275	118			39	39
<i>Cryptomonas reflexa</i>															
<i>Katablepharis ovalis</i>															
<i>Rhodomonas minuta</i>															
CHRYSTOPHYTA (Golden-Brown Algae)															
<i>Chrysiasterum catenatum</i>											784	349	523	552	126
<i>Chrysococcus</i> sp.											P				
<i>Chrysoikos</i> sp.															
<i>Chrysoisphaerella rodhei</i>															
<i>Dinobryon crenulatum</i>															
<i>Dinobryon divergens</i>							P	1340	447	447		349	261	203	105
<i>Dinobryon sertularia</i>								P				P	261	87	87
<i>Dinobryon sertularia</i> v. <i>protuberans</i>			P			651		651	434	217	235	1594	1830	1220	497
<i>Dinobryon sociale</i>						P	341	P	114	114			261	87	87
<i>Dinobryon tabellariae</i>								P							
<i>Ishtmochloron trispinatum</i>											P				
<i>Kephyrion</i> sp.															
<i>Kephyrion boreale</i>						P		325	108	108					
<i>Ochromonas</i> sp.															
<i>Ochromonas stellaris</i>															
<i>Ophiocytium</i> sp.															
<i>Pseudokephyron</i> sp.															
<i>Stichogloea doederleinii</i>						2603	341	4448	2464	1188					
<i>Synura</i> sp.															
Unidentified statospore	P		P			P	682	895	526	270	1096	931	1569	1199	191
PYRROPHYTA (Dinoflagellates)															
<i>Glenodinium</i> sp.															
<i>Gymnodinium</i> sp.															
<i>Gymnodinium uberrimum</i>			P				P	206	69	69	118	P	138	85	43
<i>Peridinium</i> sp.			P					P			P	322	P	107	107
<i>Peridinium aciculiferum</i>	290	550	P	280	159	375	682	206	421	139	P		138	46	46
<i>Peridinium cinctum</i>	P						P	P							
<i>Peridinium palatinum</i>															
<i>Peridinium palustre</i>															
<i>Peridinium willei</i>															
Unidentified cyst	1116	P	127	414	353	651	682	412	582	85					
EUGLENOPHYTA (Euglenoids)															
<i>Euglena</i> sp.											P				
<i>Phacus</i> sp.											P	P	P		
<i>Trachelomonas</i> sp.	P		516	172	172										

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	B5										B7				
	July 1997					July 1998					July 1997				
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE
CHLOROPHYTA (Green Algae)															
<i>Actinotaenium</i> sp.															
<i>Ankistrodesmus convolutus</i>															
<i>Ankistrodesmus falcatus</i>															
<i>Ankistrodesmus falcatus</i> v. <i>spiralis</i>		275	1033	436	309	2278	682	P	987	675	2353	2092	1307	1917	314
<i>Ankistrodesmus gelifactus</i>															
<i>Arthrodesmus triangularis</i>		P				P	P	P							
<i>Binuclearia</i> sp.						651		825	492	251					
<i>Botryococcus</i> sp.															
<i>Bulbochaete</i> sp.	P	1332		444	444	2253	1342	P	1198	654	823	P	P	274	274
<i>Chlamydomonas</i> sp. a															
<i>Chlamydomonas</i> sp. b															
<i>Closterium</i> sp.	P	P				P	P				P				
<i>Closterium acerosum</i>															
<i>Closterium actum</i>															
<i>Closterium diana</i>															
<i>Closterium pseudolunula</i>															
<i>Closterium rostratum</i>															
<i>Coeloastrum</i> sp.													P		
<i>Coeloastrum cambricum</i>															
<i>Coeloastrum microporum</i>								P							
<i>Coeloastrum printzii</i>						325	341	1302	656	323	P	349		116	116
<i>Coeloastrum sphaericum</i>	P	P				P	P	P					P		
<i>Cosmarium</i> sp.							192	P	64	64					
<i>Cosmarium anceps</i>															
<i>Cosmarium biculatum</i>													P		
<i>Cosmarium botrytis</i>		P													
<i>Cosmarium capitulum</i> v. <i>groenlandicum</i>															
<i>Cosmarium contracta</i>	P	P													
<i>Cosmarium coronatum</i>															
<i>Cosmarium depressum</i>	290	275		188	94						235			78	78
<i>Cosmarium granulatum</i>	P		P			P	P				P	P	103	34	34
<i>Cosmarium holmiense</i> v. <i>intermedium</i>	P					P	383	P	128	128					
<i>Cosmarium humile</i> v. <i>lacustre</i>	290			97	97						353	P		118	118
<i>Cosmarium impressulum</i> v. <i>suborthogonum</i>	P	P										P	103	34	34
<i>Cosmarium laeve</i>						325		P	108	108					
<i>Cosmarium norimbergense</i>	1159			386	386	P	P	P							
<i>Cosmarium phaseolus</i> v. <i>phaseolus</i>							192		64	64					
<i>Cosmarium pokornyanam</i>															
<i>Cosmarium pseudoprotuberans</i>															
<i>Cosmarium rectangulare</i>	362		P	121	121	563	P	P	188	188	358			119	119
<i>Cosmarium rectangulum</i>						P	P								
<i>Cosmarium reniforme</i>															
<i>Cosmarium repandum</i>															
<i>Cosmarium septentrionale</i>						188	383	155	242	71					
<i>Cosmarium speciosum</i>	1159		258	472	351			P			P	P	P		
<i>Cosmarium subgranatum</i>															
<i>Cosmarium tetraophthalmum</i>	P		258	86	86	P						P			
<i>Cosmarium turpinii</i>						P					118	P	P	39	39
<i>Cosmarium turpinii</i> v. <i>podolicum</i>															
<i>Crucigenia apiculata</i>															
<i>Crucigenia quadrata</i>													P		
<i>Crucigenia rectangularis</i>															
<i>Cylindrocapsa brebissonii</i>	1116	200	710	675	265	1627	3068	2196	2297	419	235	697		311	205
<i>Desmidiium swartzii</i> v. <i>quadrangulatum</i>															
<i>Dictyosphaerium pulchellum</i>															
<i>Elakatothrix</i> sp.						2278	P	325	868	711	1046			349	349
<i>Euastrum richteri</i>															
<i>Euastrum</i> sp.		P													
<i>Euastrum bidentatum</i>															
<i>Euastrum denticulatum</i>															
<i>Euastrum dubium</i> v. <i>maius</i>	P	206		69	69	P	P	P			P	349		116	116
<i>Euastrum elegans</i>	P	P				188	192	P	127	63	118		138	85	43
<i>Euastrum gemmatum</i>		34		11	11										
<i>Euastrum insulare</i> v. <i>silesiacum</i>															
<i>Euastrum obesum</i>															
<i>Euastrum ohioense</i>															
<i>Euastrum sinosum</i>						P		P							
<i>Euastrum verrucosum</i>															
<i>Gemmellicystis neglecta</i>															
<i>Gemmellicystis interrupta</i>															
<i>Gloeocystis schroeteri</i>	9483	7156	4907	7182	1321	976	341	3905	1741	1098	1830	17780	1046	6885	5452
<i>Gloeotila pelagica</i>															
<i>Golenkinia radiata</i> v. <i>brevispina</i>															
<i>Gonatozygon brebissonii</i>						P		P							
<i>Gonatozygon monotaenium</i>	P										P	P			
<i>Hyalotheca</i> sp.															
<i>Kirchneriella</i> sp.		P													
<i>Koliella longiseta</i>															
<i>Lagerheimia subsalsa</i>															
<i>Lagerheimia wratislawiensis</i>															
<i>Micractinium pusillum</i>															
<i>Monoraphidium</i> sp.															
<i>Mougeotia</i> sp. a	1116	P	P	372	372	986	P	3197	1394	945	725	P	784	503	252
<i>Nephrocystium limneticum</i>											470	P	523	331	166
<i>Oedogonium</i> sp.															
<i>Oocystis elliptica</i>	1673	P		558	558	3905	5454	3254	4204	652	118	349	413	293	90
<i>Oocystis lacustris</i>	2789	3587	P	2125	1087						5491	12202	6210	7968	2127
<i>Oocystis solitaria</i>															
<i>Oonophris obesa</i>	P						P	P							
<i>Quadrigula closterioides</i>															
<i>Phacotus</i> sp.	P	P									P	1046	P	349	349
<i>Pandorina morum</i>															
<i>Pediastrum boryanum</i>		P									P	1394	P	465	465
<i>Pediastrum boryanum</i> v. <i>ellesmerense</i>			P								P				
<i>Pediastrum duplex</i>															
<i>Pediastrum duplex</i> v. <i>clathratum</i>															
<i>Pediastrum integrum</i> v. <i>scutum</i>															
<i>Pediastrum tetras</i>						P	1364	825	730	397	118			39	39

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Species	B5										B7					
	July 1997					July 1998					July 1997					
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE	
<i>Penium</i> sp.																
<i>Penium margaritaceum</i>	P	133		44	44								161	P	54	54
<i>Pleurotaenium</i> sp.																
<i>Pleurotaenium trabecula</i>																
<i>Protoderma</i> sp.																
<i>Scenedesmus bijuga</i>	2231	1101	1032	1455	389											
<i>Scenedesmus acuminatus</i>	P	550		183	183	563			188	188	523		523	349	174	
<i>Scenedesmus arcuatus</i>																
<i>Scenedesmus denticulatus</i>				1033	344											
<i>Scenedesmus eornis</i>				2582	861											
<i>Scenedesmus incrassatulus</i>	2231	2752	516	1833	675	1126	682		603	327	2353	349	3661	2121	963	
<i>Scenedesmus obliquus</i>																
<i>Scenedesmus quadricauda</i>	1739	533		757	514	1627	P	P	542	542			P			
<i>Scenedesmus spinosus</i>																
<i>Scenedesmus wisconsinensis</i>																
<i>Spirogyra</i> sp.							P									
<i>Staurastrum</i> sp. a	P	P	P			P	P	P			118	P	P	39	39	
<i>Staurastrum</i> sp. b																
<i>Staurastrum</i> sp. c																
<i>Staurastrum anatinum</i> v. <i>biradiatum</i>											P					
<i>Staurastrum antilopaeum</i>																
<i>Staurastrum anatinum</i>																
<i>Staurastrum apiculatum</i>																
<i>Staurastrum borgeanum</i>	P		P			P	P	P								
<i>Staurastrum brebissonii</i>											349		P	116	116	
<i>Staurastrum clevei</i>																
<i>Staurastrum curvatum</i>																
<i>Staurastrum cuspidatum</i>																
<i>Staurastrum dejectum</i>		P				P	32	206	79	64	P	P	P			
<i>Staurastrum furcigerum</i>						94			31	31						
<i>Staurastrum gladiusum</i>																
<i>Staurastrum hystrix</i>																
<i>Staurastrum longibranchiatum</i>																
<i>Staurastrum lunatum</i>																
<i>Staurastrum manfeldtii</i>																
<i>Staurastrum pachyrhynchum</i>		133		44	44	188	P	P	63	63		P	P			
<i>Staurastrum pilosum</i>																
<i>Staurastrum proboscidiolum</i>																
<i>Staurastrum rhabdophorum</i>																
<i>Staurastrum subcruciatum</i>																
<i>Staurastrum tetracerum</i>			258	86	86								349		116	116
<i>Staurastrum varians</i>																
<i>Staurastrum triangularis</i>																
<i>Stigeoclonium</i> sp.																
<i>Teilingia granulata</i>		P	258	86	86	976	2045	1627	1549	311	1307	3138	523	1656	775	
<i>Tetraedron tumidulum</i>																
<i>Tetraedron limneticum</i>																
<i>Tetraedron lobulatum</i>																
<i>Tetraedron minimum</i>	558		P	186	186	325	682	651	553	114	P	349		116	116	
<i>Tetraedron muticum</i>	P					325			108	108	P					
<i>Tetraedron arthrodesmiforme</i>																
<i>Tetraedron caudatum</i>																
<i>Tetraedron trigonum</i>																
<i>Trochiscia granulata</i>	580	P	P	193	193				68	23						
<i>Xanthidium antilopaeum</i>																
<i>Xanthidium subhastiferum</i> v. <i>murrayi</i>																
<i>Zygnema</i> sp.												P	P			
CYANOPHYTA (Cyanobacteria)																
<i>Agmenellum quadruplicatum</i>	P		P			P	P									
<i>Agmenellum thermale</i>	4462	P	3099	2520	1320	6833	51345	45879	34686	14015	P	6624	11243	5956	3263	
<i>Anabaena</i> sp.	13387	31101	P	14829	9007		3409	14968	6126	4529						
<i>Anabaena lapponica</i>											9812	8018	5229	7686	1333	
<i>Anabaena planctonica</i>																
<i>Anacystis dimidiata</i>						5369	P	1139	2169	1633						
<i>Anacystis marina</i>																
<i>Anacystis montana</i>																
<i>Anacystis thermalis</i>	2231	1101	6714	3349	1714						4706			1569	1569	
<i>Aphanocapsa elachista</i>									4886	4886						
<i>Aphanocapsa elachista</i> v. <i>planctonica</i>	5578	2202	17044	8275	4492	23453	61699	P	28384	17981	49679		60399	36693	18605	
<i>Aphanothece clathrata</i>											42358	19174	11505	24346	9274	
<i>Chlorogloea microcystoides</i>		10459		3486	3486											
<i>Chroococcus turgidus</i>	6136	550	P	2229	1960						2353	P	523	959	713	
<i>Coccochloris aeruginosa</i>																
<i>Coelosphaerium kuetzingianum</i>																
<i>Dactylococcopsis linearis</i>																
<i>Desmonema wrangelii</i>	18965	19266	10330	16187	2930											
<i>Dichothrix gypsophila</i>	6694		1808	2834	1999	199134	82833	75489	119152	40047	2876	P	49679	17518	16102	
<i>Gloeothece linearis</i> v. <i>composite</i>	P	P	516	172	172						P	4532	1961	2164	1312	
<i>Gomphosphaeria lacustris</i>	P		10330	3443	3443	10738			3579	3579	27541	83670	37070	24619		
<i>Lyngbya birgei</i>																
<i>Lyngbya contorta</i>																
<i>Microcoleus vaginatus</i>																
<i>Microcystis flos-aquae</i>	P	52018	76957	42992	22669				74296	74296	59345		83670	47672	24849	
<i>Nostoc commune</i>	47413	15963	9038	24138	11808	24729	18407	60847	34661	13220	1880	16573	17780	12078	5111	
<i>Oncobyrsa cessatii</i>																
<i>Oscillatoria</i> sp.																
<i>Oscillatoria limosa</i>																
<i>Pseudanabaena</i> sp.																
<i>Schizogonium murale</i>																
<i>Schizothrix calcicola</i>	156742	42110	34346	77733	39568	348160	346672	326034	340289	7140	274803	344992	148514	256103	57484	
<i>Scopulonema minus</i>									10913	7752						
<i>Stigonema mammosum</i>	P															
Unidentified Cyanophyte akinete																
Total Algal Density (No. cells/cm²)	397882	244969	248855	297235	50336	743349	774793	900289	806144	47940	533680	703942	559860	599161	52933	

^a P = present, but not encountered during routine cell counts; SE = standard error.

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	B7					D7					G2				
	July 1998					July 1997					July 1997				
	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE
BACILLARIOPHYTA (Diatoms)															
<i>Achnanthes detha</i>						3138	2440	9517	5032	2252					
<i>Achnanthes flexella</i>	P	P	P			P	P	P			P	P	P		
<i>Achnanthes lanceolata</i>															
<i>Achnanthes minutissima</i>	50057	87381	36316	57918	15256	36083	15979	25197	25753	5810	12992	21223	18347	17521	2412
<i>Achnanthes minutissima</i> v. <i>cryptocephala</i>	4718	6136	2957	4604	919		348	P	116	116	163	1307	P	490	411
<i>Amphipleura</i> sp.			P												
<i>Amphora</i> sp.	1302	682		661	376										
<i>Amphora ovalis</i>	P	P				P	P	P			P	P	P		
<i>Amphora ovalis</i> v. <i>pediculus</i>															
<i>Anomoeoneis</i> sp.															
<i>Anomoeoneis vitrea</i>															
<i>Asterionella formosa</i>															
<i>Caloneis</i> sp.	P	1364	P	455	455										
<i>Caloneis ventricosa</i>	P							P							
<i>Caloneis ventricosa</i> v. <i>truncatula</i>							P	P			163			54	54
<i>Cocconeis diminuta</i>															
<i>Cocconeis pediculus</i>															
<i>Cocconeis placentula</i>															
<i>Cocconeis placentula</i> v. <i>euglypta</i>															
<i>Cocconeis</i> sp.															
<i>Coscinodiscus denarius</i>															
<i>Coscinodiscus lacustris</i>															
<i>Cyclotella</i> sp.															
<i>Cyclotella antiqua</i>	571	1136	1109	939	184	P	P	244	81	81	327	261	261	283	22
<i>Cyclotella comta</i>	P					P									
<i>Cyclotella glomerata</i>		P	P												
<i>Cyclotella kutzingiana</i>	P	P	P												
<i>Cyclotella meneghiniana</i>															
<i>Cyclotella ocellata</i>															
<i>Cyclotella striata</i>						P	P	P							
<i>Cymbella affinis</i>	1464	P	P	488	488										
<i>Cymbella amphioxys</i>								P					P		
<i>Cymbella aspera</i>															
<i>Cymbella cistula</i>		511		170	170	P		P							
<i>Cymbella cuspidata</i>															
<i>Cymbella cymbiformis</i>	P		323	108	108										
<i>Cymbella cymbiformis</i> v. <i>nonpunctata</i>						550	1293	488	777	259	105	P	131	79	40
<i>Cymbella gracilis</i>	1302	P		434	434										
<i>Cymbella lanceolata</i>															
<i>Cymbella mexicanum</i> v. <i>janischii</i>															
<i>Cymbella minuta</i>	1952	7840	2587	4126	1866	5666	523	2684	2958	1491	327	261	392	327	38
<i>Cymbella naviculiformis</i>		P	P												
<i>Cymbella sinuata</i>															
<i>Cymbella tumida</i>															
<i>Cymbella turgida</i>						P	174	P	58	58				P	
<i>Cymbella turgidula</i>								P							
<i>Cymbella</i> sp.						P	P	488	163	163				P	
<i>Denticula tenuis</i>	651	P	739	463	233	275	174	P	150	80	327	523	P	283	153
<i>Diatoma elongatum</i>	2603	758	2125	1829	553	4183	1991	4759	3644	843	1552	1700	261	1171	457
<i>Diatoma vulgare</i>															
<i>Didymosphenia geminata</i>											P				
<i>Diploneis</i> sp.	P		P												
<i>Diploneis elliptica</i>								P	P				P	P	
<i>Diploneis finnica</i>															
<i>Diploneis interrupta</i>															
<i>Diploneis ovalis</i>	P					P		P							
<i>Epithemia sorex</i>	380	3013	832	1408	813	3326	1468	2806	2533	553	490	154	175	273	109
<i>Eunotia arcus</i>															
<i>Eunotia exigua</i>															
<i>Eunotia flexuosa</i>															
<i>Eunotia glacialis</i>															
<i>Eunotia maior</i>															
<i>Eunotia papilio</i>															
<i>Eunotia praeurupta</i>	1302	P	P	434	434	P	P	P			P	P	P		
<i>Eunotia praeurupta</i> v. <i>bidens</i>															
<i>Eunotia sudetica</i>															
<i>Eunotia</i> sp.						P	P				163			54	54
<i>Fragilaria brevistriata</i>															
<i>Fragilaria construens</i>		P													
<i>Fragilaria crotonensis</i>	1952	P	P	651	651	4314	1438	1708	2487	917	490	981	P	490	283
<i>Fragilaria intermedia</i>															
<i>Fragilaria pinnata</i>	P	P	P			7060	3050	4271	4794	1187		1569	2092	1220	629
<i>Frustulia vulgaris</i>															
<i>Gomphonema</i> sp.	P														
<i>Gomphonema acuminatum</i>															
<i>Gomphonema acuminatum</i> v. <i>coronata</i>															
<i>Gomphonema angustatum</i>	651	2045	2217	1638	496	261	349	164	258	53	P	261	P	87	87
<i>Gomphonema constrictum</i>								P			163		P	54	54
<i>Gomphonema gracile</i>	P		861	287	287										
<i>Gomphonema intricatum</i> v. <i>vibrio</i>															
<i>Gomphonema olivaceum</i>		P	P												
<i>Gomphonema parvulum</i>															
<i>Gyrosigma</i> sp.															
<i>Hantzschia amphioxys</i>															
<i>Melosira</i> sp.															
<i>Melosira granulata</i>															
<i>Meridion circulare</i>															
<i>Navicula</i> sp.															
<i>Navicula amphibola</i>							P	P	P				P		
<i>Navicula anglica</i>		P													
<i>Navicula aspera</i>															
<i>Navicula bacillum</i>															
<i>Navicula decussis</i>								P							
<i>Navicula dolosa</i>															
<i>Navicula capitata</i>															
<i>Navicula cryptocephala</i>	2493	1704	5498	3232	1156	2745	2034	488	1756	666	600	2092	332	1008	547
<i>Navicula cryptocephala</i> v. <i>intermedia</i>						2092	698	2806	1865	619	3705	4183	4052	3980	143
<i>Navicula cuspidata</i>															

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	B7					D7					G2				
	July 1998					July 1997					July 1997				
	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE
<i>Navicula exigua</i>							P				P	P	P		
<i>Navicula exigua v. capitata</i>															
<i>Navicula lacustris</i>		P													
<i>Navicula laevisissima</i>															
<i>Navicula lanceolata</i>		11846	P	3949	3949										
<i>Navicula mutica</i>		P													
<i>Navicula placenta</i>															
<i>Navicula pseudoscutiformis</i>															
<i>Navicula pupula</i>		P	P			P	P	P			P	P			
<i>Navicula radiosa</i>		4692	1479	2057	1385	784	436	2360	1193	592	653	261	175	363	147
<i>Navicula reinhardtii</i>							P								
<i>Navicula rhynchocephala</i>															
<i>Navicula tripunctata</i>	2603	254		952	829										
<i>Navicula tripunctata v. schizonemoides</i>															
<i>Navicula viridula</i>	380	3091	3142	2204	912										
<i>Nedium sp.</i>											P				
<i>Nedium bisulcatum</i>															
<i>Nedium dubium</i>															
<i>Nedium hitchcockii</i>															
<i>Nedium iridis v. amphigomphus</i>						P						154		51	51
<i>Nitzschia sp.</i>		P													
<i>Nitzschia acicularis</i>															
<i>Nitzschia amphibia</i>			P				P								
<i>Nitzschia angustata</i>			P				P	P							
<i>Nitzschia dissipata</i>															
<i>Nitzschia filiformis</i>	380	1364	1109	951	295	523	P		174	174	327	719	458	501	115
<i>Nitzschia fonticola</i>	P	P	P			P					654	P	P	218	218
<i>Nitzschia palea</i>	P														
<i>Nitzschia sigmoidea</i>		P	P			P	174	P	58	58					
<i>Pinnularia sp.</i>						P							P	P	
<i>Pinnularia biceps</i>															
<i>Pinnularia borealis</i>															
<i>Pinnularia maior</i>															
<i>Pinnularia mesolepta</i>			P												
<i>Pinnularia nodosa</i>								P							
<i>Pinnularia streptoraphe</i>								P							
<i>Pinnularia viridis</i>															
<i>Rhizosolenia longiseta</i>															
<i>Rhizosolenia curvata</i>															
<i>Rhopalodia gibba</i>	P	P	P			P	174	P	58	58					
<i>Rhopalodia gebberula</i>															
<i>Stauroneis anceps</i>		P				P	P	P			P	P	P		
<i>Stauroneis phoenicenteron</i>						P	P								
<i>Stauroneis smithii</i>															
<i>Stauroneis sp.</i>			P												
<i>Stephanodiscus astraee</i>	P	P	P												
<i>Surirella sp.</i>		P						P							
<i>Surirella angustata</i>															
<i>Synedra actinastroides</i>	18059	19819	12541	16806	2192	19419	7585	14733	13912	3441	2533	4707	4053	3764	644
<i>Synedra acus</i>	P	P	647	216	216										
<i>Synedra sp.</i>															
<i>Synedra ulna</i>	P	758	P	253	253	P					P	P	P		
<i>Tabellaria fenestrata</i>	903	4072	370	1782	1155	783	1569		784	453	396	2222	498	1039	592
<i>Tabellaria flocculosa</i>	1302	13124	122	4849	4151	6406	610	6772	4596	1996	2723	784	2117	1875	573
CRYPTOPHYTA (Cryptomonads)															
<i>Cryptomonas curvata</i>															
<i>Cryptomonas erosa</i>		P					P								
<i>Cryptomonas ovata</i>															
<i>Cryptomonas reflexa</i>															
<i>Katablepharis ovalis</i>															
<i>Rhodomonas minuta</i>						261			87	87	163			54	54
CHRYSOPHYTA (Golden-Brown Algae)															
<i>Chrysiaster catenatum</i>															
<i>Chrysococcus sp.</i>												261		87	87
<i>Chrysoikos sp.</i>															
<i>Chrysophaerella rodheii</i>															
<i>Dinobryon crenulatum</i>															
<i>Dinobryon divergens</i>						P									
<i>Dinobryon sertularia</i>	1302	3238	310	1617	860	523			174	174	163		P	54	54
<i>Dinobryon sertularia v. protuberans</i>	7484	8352	5082	6973	978	1046	872	732	883	91	327	P	P	109	109
<i>Dinobryon sociale</i>	1302	1364	P	889	445										
<i>Dinobryon sociale</i>	2278	3409	1479	2389	560										
<i>Dinobryon tabellariae</i>						261		244	168	84	P	P			
<i>Ishtmochloron trispinatum</i>		P									P		P		
<i>Kephyrion sp.</i>															
<i>Kephyrion boreale</i>	651	1364		672	394	784	349	244	459	165	163	523		229	155
<i>Ochromonas spa</i>		2045		805	629										
<i>Ochromonas stellaris</i>			P										P		
<i>Ophiocytium sp.</i>															
<i>Pseudokephyrion sp.</i>															
<i>Stichogloea doederleinii</i>	5206	5454	4805	5155	189										
<i>Synura sp.</i>															
Unidentified statospore	1952	1364	1479	1598	180	523	872	976	790	137	327	2615	1569	1504	661
PYRROPHYTA (Dinoflagellates)															
<i>Glenodinium sp.</i>															
<i>Gymnodinium sp.</i>															
<i>Gymnodinium uberrimum</i>	761	P	P	254	254	P			44	44	P		P		
<i>Peridinium sp.</i>	P	P	P			131	P	P			P	P	P		
<i>Peridinium aciculiferum</i>	P		P			P		P			79	P	P	26	26
<i>Peridinium cinctum</i>		P													
<i>Peridinium palatinum</i>															
<i>Peridinium palustre</i>															
<i>Peridinium williei</i>															
Unidentified cyst	380	1136	277	598	271		P	244	81	81	708	154	P	287	215
EUGLENOPHYTA (Euglenoids)															
<i>Euglena sp.</i>															
<i>Phacus sp.</i>			P												
<i>Trachelomonas sp.</i>			P			P					P				

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Species	B7					D7					G2				
	July 1998					July 1997					July 1997				
	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE
CHLOROPHYTA (Green Algae)															
<i>Actinotaenium</i> sp.															
<i>Ankistrodesmus convolutus</i>															
<i>Ankistrodesmus falcatus</i>															
<i>Ankistrodesmus falcatus</i> v. <i>spiralis</i>	P	P	122	41	41	523	291	244	353	86	P	P			
<i>Ankistrodesmus gelifactus</i>	1302	P	739	680	377	1569	697	1464	1243	275	238	523	523	428	95
<i>Arthrodesmus triangularis</i>		P	P												
<i>Binuclearia</i> sp.		P													
<i>Botryococcus</i> sp.		P													
<i>Bulbochaete</i> sp.	8135	379	1479	3331	2423	1569	1264	1220	1351	110	1188	P		396	396
<i>Chlamydomonas</i> sp. a															
<i>Chlamydomonas</i> sp. b	651			217	217										
<i>Closterium</i> sp.		P	P			P		P							
<i>Closterium acerosum</i>															
<i>Closterium actum</i>													261	87	87
<i>Closterium dianae</i>															
<i>Closterium pseudolunula</i>															
<i>Closterium rostratum</i>															
<i>Coeloastrum</i> sp.															
<i>Coeloastrum cambricum</i>															
<i>Coeloastrum microporum</i>		P	20699	6900	6900										
<i>Coeloastrum printzii</i>		P	P												
<i>Coeloastrum sphaericum</i>	P					3922	P	P	1307	1307	163		P	54	54
<i>Cosmarium</i> sp.	P	P							58	58					
<i>Cosmarium anceps</i>															
<i>Cosmarium biculatum</i>															
<i>Cosmarium botrytis</i>						P	P	131	44	44			166	55	55
<i>Cosmarium capitulum</i> v. <i>groenlandicum</i>															
<i>Cosmarium contracta</i>															
<i>Cosmarium coronatum</i>															
<i>Cosmarium depressum</i>															
<i>Cosmarium granulatum</i>		P	739	246	246	P		P			P	P	154	51	51
<i>Cosmarium holmiense</i> v. <i>intermedium</i>		P				P					P				
<i>Cosmarium humile</i> v. <i>lacustre</i>	P	P	P												
<i>Cosmarium impressulum</i> v. <i>suborthogonum</i>		P													
<i>Cosmarium laeve</i>															
<i>Cosmarium norimbergense</i>	380	P	P	127	127	138	P	P	46	46	P	P			
<i>Cosmarium phaseolus</i> v. <i>phaseolus</i>	P	1364		455	455										
<i>Cosmarium pokomyanum</i>															
<i>Cosmarium pseudoprotuberans</i>															
<i>Cosmarium rectangulare</i>	P	P	P			P		P			82	154	P	79	44
<i>Cosmarium rectangulum</i>		331	P	110	110										
<i>Cosmarium reniforme</i>															
<i>Cosmarium repandum</i>															
<i>Cosmarium septentrionale</i>	P	1515	370	628	456										
<i>Cosmarium speciosum</i>						550	P	367	306	162	286	523	498	436	75
<i>Cosmarium subgranatum</i>															
<i>Cosmarium tetraophthalmum</i>	P		P			P							P		
<i>Cosmarium turpinii</i>		P	P								P	P			
<i>Cosmarium turpinii</i> v. <i>podolicum</i>															
<i>Crucigenia apiculata</i>															
<i>Crucigenia quadrata</i>		P													
<i>Crucigenia rectangularis</i>															
<i>Cylindrocystis brebissonii</i>	651	907	739	766	75	523	174	P	232	154	P	784	P	261	261
<i>Desmidiium swartzii</i> v. <i>quadrangulatum</i>															
<i>Dictyosphaerium pulchellum</i>															
<i>Elakatothrix</i> sp.	1302	P	370	557	387	261	P	58	106	79	163	P	523	229	155
<i>Euastrum richteri</i>															
<i>Euastrum</i> sp.															
<i>Euastrum bidentatum</i>		P													
<i>Euastrum denticulatum</i>															
<i>Euastrum dubium</i> v. <i>maius</i>		758	P	253	253	P	523	P	174	174	P	P	P		
<i>Euastrum elegans</i>	380	P	370	250	125	619	P		206	206	79	P	P	26	26
<i>Euastrum gemmatum</i>									145	77	P		P		
<i>Euastrum insulare</i> v. <i>silesiacum</i>															
<i>Euastrum obesum</i>															
<i>Euastrum ohioense</i>															
<i>Euastrum sinosum</i>						P		P							
<i>Euastrum verrucosum</i>	P		P												
<i>Gemmellicystis neglecta</i>															
<i>Geminella interrupta</i>															
<i>Gloeocystis schroeteri</i>	5857	6136	739	4244	1754	5752	2615	6589	4985	1210	4739	12726	4706	7390	2668
<i>Gloeotila pelagica</i>															
<i>Golenkinia radiata</i> v. <i>brevispina</i>															
<i>Gonatozygon brebissonii</i>	P	P													
<i>Gonatozygon monotaenium</i>															
<i>Hyalotheca</i> sp.															
<i>Kirchneriella</i> sp.						261	174		145	77					
<i>Koliella longiseta</i>															
<i>Lagerheimia subsalsa</i>															
<i>Lagerheimia wratislawiensis</i>															
<i>Micractinium pusillum</i>		P													
<i>Monoraphidium</i> sp.															
<i>Mougeotia</i> sp. a	P	P	P			981	479	610	690	150	1783	2092	981	1619	331
<i>Nephroclytium limneticum</i>		P									327		P	109	109
<i>Oeodogonium</i> sp.															
<i>Oocystis elliptica</i>	5206			1735	1735	P		P			P	P	P		
<i>Oocystis lacustris</i>		16362	2218	6193	5124	7844	1917	3172	4311	1803	9478	6798	9151	8476	844
<i>Oocystis solitaria</i>															
<i>Oonephris obesa</i>	2063	2045	P	1369	685			1708	569	569					
<i>Quadrigula closterioides</i>						P									
<i>Phacotus</i> sp.						261	174		145	77					
<i>Pandorina morum</i>						P									
<i>Pediastrum boryanum</i>															
<i>Pediastrum boryanum</i> v. <i>ellesmerense</i>															
<i>Pediastrum duplex</i>	P		P			2702	174	P	959	873					
<i>Pediastrum duplex</i> v. <i>clathratum</i>															
<i>Pediastrum integrum</i> v. <i>scutum</i>															
<i>Pediastrum tetras</i>	P	3409		1136	1136	1583	1394	P	992	499	P	P			

Appendix E3. Periphytic algal densities (no. cells/cm²) in lakes of the Meliadine Study Area, 1997 and 1998

Species	B7					D7					G2				
	July 1998					July 1997					July 1997				
	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE
<i>Penium</i> sp.															
<i>Penium margaritaceum</i>															
<i>Pleurotaenium</i> sp.															
<i>Pleurotaenium trabecula</i>															
<i>Protoderma</i> sp.															
<i>Scenedesmus bijuga</i>			P					976	325	325	P				
<i>Scenedesmus acuminatus</i>						1569	P	244	604	487					
<i>Scenedesmus arcuatus</i>															
<i>Scenedesmus denticulatis</i>			P												
<i>Scenedesmus eornis</i>															
<i>Scenedesmus incrasatulus</i>	P	4091	P	1364	1364	P		P			1307	4445	1328	2360	1043
<i>Scenedesmus obliquus</i>															
<i>Scenedesmus quadricauda</i>		P				3922		2928	2283	1177		P	P		
<i>Scenedesmus spinosus</i>															
<i>Scenedesmus wisconsinensis</i>															
<i>Spirogyra</i> sp.		P													
<i>Staurastrum</i> sp. a	380	P	P	127	127	P	P	174	58	58	327				109
<i>Staurastrum</i> sp. b															
<i>Staurastrum</i> sp. c															
<i>Staurastrum anatinum</i> v. <i>biradiatum</i>															
<i>Staurastrum antilopaeum</i>															
<i>Staurastrum anatinum</i>											P				
<i>Staurastrum apiculatum</i>															
<i>Staurastrum borgeanum</i>	P	379	370	250	125			P				392	P	131	131
<i>Staurastrum brebissonii</i>											P	P			
<i>Staurastrum clevei</i>															
<i>Staurastrum curvatum</i>		P													
<i>Staurastrum cuspidatum</i>															
<i>Staurastrum dejectum</i>		P	P			P	P	P			P		P		
<i>Staurastrum furcigerum</i>			P												
<i>Staurastrum gladiusum</i>															
<i>Staurastrum hystrix</i>															
<i>Staurastrum longibranchiatum</i>															
<i>Staurastrum lunatum</i>															
<i>Staurastrum manfeldtii</i>															
<i>Staurastrum pachyrhynchum</i>	P	P	370	123	123	138		P	46	46		P	P	P	
<i>Staurastrum pilosum</i>															
<i>Staurastrum proboscidiolum</i>															
<i>Staurastrum rhabdophorum</i>															
<i>Staurastrum subcruciatum</i>											P		P		
<i>Staurastrum tetracerum</i>	P	P				P									
<i>Staurastrum varians</i>		P													
<i>Staurastrum triangularis</i>															
<i>Stigeoclonium</i> sp.															
<i>Teilingia granulata</i>	1302	5757	3696	3585	1287	2092	P	732	941	613	1634	523	261	806	421
<i>Tetraedron tumidulum</i>												P			
<i>Tetraedron limneticum</i>															
<i>Tetraedron lobulatum</i>															
<i>Tetraedron minimum</i>		1364	739	701	394	1046	1743	732	1174	299	1307	784		697	380
<i>Tetraedron muticum</i>	5857		P	1952	1952							P			
<i>Tetraedron arthrodesmiforme</i>		682	370	351	197										
<i>Tetraedron caudatum</i>											490	784	498	591	97
<i>Tetraedron trigonum</i>															
<i>Trochiscia granulata</i>		P													
<i>Xanthidium antilopaeum</i>															
<i>Xanthidium subhastiferum</i> v. <i>murrayi</i>															
<i>Zygnema</i> sp.		P	P								P	261	P	87	87
CYANOPHYTA (Cyanobacteria)															
<i>Agmenellum quadruplicatum</i>											P	P	P		
<i>Agmenellum thermale</i>	P	36815	19959	18925	10640						P		10459	3486	3486
<i>Anabaena</i> sp.	P	P													
<i>Anabaena lapponica</i>						36736	35211	29284	33744	2273	2942	P	1046	1329	861
<i>Anabaena planctonica</i>															
<i>Anacystis dimidiata</i>	651	1364	1848	1288	348	P	P								
<i>Anacystis marina</i>															
<i>Anacystis montana</i>											52294			17431	17431
<i>Anacystis thermalis</i>		48480	4436	17639	15474	4445	1743	2928	3039	782	327			109	109
<i>Aphanocapsa elachista</i>	24729	18067	34006	25601	4622	1569			523	523					
<i>Aphanocapsa elachista</i> v. <i>planctonica</i>	40457	306790	124564	157270	78604		17082	10982	9355	4998		173877	23794	65890	54428
<i>Aphanothece clathrata</i>	121603			40534	40534						16669	4183	6537	9130	3830
<i>Chlorogloea microcystoides</i>															
<i>Chroococcus turgidus</i>						P	174	P	58	58	P	P	784	261	261
<i>Coccolithus aeruginosa</i>															
<i>Coelosphaerium kuetzingianum</i>											P				
<i>Dactylococcopsis linearis</i>	12365	8863	P	7076	3680										
<i>Desmonema wrangellii</i>						31899	37651	6101	25217	9701	31703	10197	55431	32444	13063
<i>Dichothrix gypsophila</i>	73824	279520	4805	119383	82510	3138			1046	1046	P	15534	66413	27316	20056
<i>Gloeothece linearis</i> v. <i>composite</i>											376	P	2092	823	644
<i>Gomphosphaeria lacustris</i>	P	17424	17742	11722	5862	34775	204513	P	79763	63178	23859	104587	49970	59472	23784
<i>Lyngbya birgei</i>															
<i>Lyngbya contorta</i>															
<i>Microcoleus vaginatus</i>	P	P													P
<i>Microcystis flos-aquae</i>	P		33266	11089	11089						P				
<i>Nostoc commune</i>	8785	57267	40289	35447	14203	P	P	P			P	44445	78441	40962	22711
<i>Oncobrysa cesatii</i>															
<i>Oscillatoria</i> sp.															
<i>Oscillatoria limosa</i>															
<i>Pseudanabaena</i> sp.															
<i>Schizogonium murale</i>															
<i>Schizothrix calcicola</i>	383952	587673	206251	392625	110192	138840	81926	104204	108323	16558	181394	202377	83931	155901	36491
<i>Scopulonema minus</i>	26681	31361	14600	24214	4993										
<i>Stigonema mamillosum</i>		P	P								2535	P	2092	1542	782
Unidentified Cyanophyte akinete							174		58	58					
Total Algal Density (No. cells/cm²)	842854	1638419	625411	1035561	307895	390364	442536	268016	366972	51719	366473	633842	435322	478546	80151

^a P = present, but not encountered during routine cell counts; SE = standard error.

Appendix E4. Phytoplankton and zooplankton collection data from the Meliadine Study Area, 1997 and 1998.

Basin (Site)	Date	UTM Coordinates (Zone 15V)		Secchi Disk Depth (m)	Phytoplankton		Zooplankton		
		Easting	Northing		Haul Depth (m)	Chlorophyll a (mg/m ³)	Haul Depth (m)	No. of Hauls ^b	Volume Filtered (m ³)
Meliadine Lake (ML-E)	19-Jul-97	542941	6988744	7.5	13.0	0.00	13.0	2	0.338
	17-Aug-97	543003	6988672	6.7	12.5	0.46	12.5	2	0.325
	17-Jul-98	543271	6988687	5.0	10.0	0.00	10.0	2	0.260
	04-Sep-98	543374	6988690	4.5	12.5	1.82	12.0	1	0.156
Meliadine Lake (ML-S)	20-Jul-97	532380	6989160	6.3 ^a	5.0	0.43	5.0	2	0.130
	16-Aug-97	532283	6989160	6.2 ^a	5.0	0.33	5.0	3	0.195
	25-Jul-98	533472	6988343	5.2	5.0	0.63	5.0	2	0.130
	01-Sep-98	534000	6987600	4.1	8.5	2.43	8.0	1	0.104
Meliadine Lake (ML-SE)	22-Jul-98	535806	6986383	3.0 ^a	2.0	0.83	2.0	2	0.052
Meliadine Lake (ML-W)	20-Jul-97	524254	7000982	8.0	7.0	0.06	7.0	2	0.182
	16-Aug-97	524294	7000981	8.5 ^a	7.0	0.25	7.0	2	0.182
	27-Jul-98	525720	7000850	6.5 ^a	5.0	0.47	5.0	2	0.130
Peter Lake (PL)	28-Jul-98	509585	6993227	7.5	12.0	0.30	12.0	2	0.312
Little Meliadine Lake (LML)	29-Jul-98	537808	6977963	6.6	12.0	0.57	12.0	2	0.312
	02-Sep-98	537808	6977963	7.5	12.0	0.90	12.0	1	0.156
Basin A (A6)	23-Jul-97	541777	6985645	2.5 ^a	1.5	0.00	1.5	2	0.039
	17-Aug-97	541816	6985549	2.5 ^a	2.0	1.18	2.0	2	0.052
	24-Jul-98	541777	6985645	3.8 ^a	3.0	1.08	3.0	2	0.078
Basin A (A8)	22-Jul-97	540123	6987122	3.6 ^a	2.5	0.96	2.5	2	0.065
	18-Aug-97	540108	6987096	3.4 ^a	2.5	0.96	2.5	2	0.065
	23-Jul-98	540123	6987122	2.8 ^a	2.0	1.50	2.0	2	0.052
Basin B (B2)	21-Jul-97	537540	6986964	2.6 ^a	2.0	1.49	2.0	3	0.078
	18-Aug-97	537441	6986909	2.5 ^a	2.0	1.22	2.0	2	0.052
	21-Jul-98	537540	6986964	3.0 ^a	2.5	2.08	2.5	2	0.065
	30-Aug-98	537441	6986909	2.8 ^a	2.5	1.89	2.5	2	0.065
Basin B (B5)	19-Jul-97	537794	6988576	2.8 ^a	2.0	3.03	2.0	2	0.052
	18-Aug-97	537799	6988532	2.3 ^a	2.0	3.08	2.0	2	0.052
	20-Jul-98	537794	6988576	2.0 ^a	1.0	1.46	1.3	2	0.034
	28-Aug-98	537799	6988532	3.0 ^a	2.5	1.56	2.5	2	0.065
Basin B (B7)	18-Jul-97	537685	6989544	3.2 ^a	2.5	1.08	2.5	2	0.065
	19-Aug-97	537701	6989443	3.8 ^a	2.5	1.67	2.5	2	0.065
	19-Jul-98	537685	6989544	3.5 ^a	3.0	n.d. ^c	3.0	2	0.078
	22-Aug-98	537701	6989443	3.0	3.5	2.22	2.5	2	0.065
Basin D (D7)	17-Jul-97	536724	6988687	2.2 ^a	2.0	1.68	2.0	3	0.078
	19-Aug-97	536774	6988690	2.2 ^a	2.0	1.27	2.0	2	0.052
Basin G (G2)	24-Jul-97	538579	6990582	2.25 ^a	1.5	1.01	1.5	3	0.059
	22-Aug-97	538579	6990582	2.1 ^a	1.5	1.36	1.5	2	0.039

^a Secchi depth = bottom depth

^b Zooplankton net aperture size = 0.013 m²

^c n.d. = not determined

Appendix E5. Phytoplankton biomass (µg/L) in lakes of the Meliadine Study Area, 1997 and 1998.

Taxa	ML-E				ML-S				ML-W			ML-SE	PL	LML		A6		
	19-Jul-97	17-Aug-97	17-Jul-98	04-Sep-98	20-Jul-97	16-Aug-97	25-Jul-98	01-Sep-98	20-Jul-97	16-Aug-97	27-Jul-98	22-Jul-98	28-Jul-98	29-Jul-98	02-Sep-98	23-Jul-97	17-Aug-97	24-Jul-98
Bacillariophyta (Diatoms)																		
<i>Achnanthes detha</i>																		
<i>Achnanthes exigua</i>																		
<i>Achnanthes flexella</i>																		
<i>Achnanthes lanceolata</i>	P							P			P	P	P	P			P	P
<i>Achnanthes minutissima</i>	0.7	P	0.7	P	0.6	P	1.2		1.0	P	P			P	P	P	5.8	1.3
<i>Achnanthes minutissima v. cryptocephala</i>		P		P					P		P			P		P	P	P
<i>Amphipleura pellucida</i>							P											
<i>Amphora ovalis</i>			P				P											P
<i>Amphora ovalis v. pediculus</i>																		
<i>Anomoeoneis vitrea</i>			P				P											
<i>Asterionella formosa</i>		89.1	4.0	145.3	P	P	P	30.8	P	P	P	P	P	8.4	2.1		P	
<i>Cocconeis placentula</i>																P		
<i>Cocconeis diminuta</i>																		
<i>Cocconeis sp.</i>								P				P						
<i>Cyclotella antiqua</i>																		
<i>Cyclotella bodanica</i>	12.9	P			20.2	3.1			P	2.9			14.3		4.5	P	15.0	
<i>Cyclotella comta</i>				18.1														
<i>Cyclotella glomerata</i>	0.5	56.6			0.9		0.5	5.1								87.5	117.6	
<i>Cyclotella kutzingiana</i>													4.9					42.5
<i>Cyclotella meneghiniana</i>														8.5				
<i>Cyclotella ocellata</i>		P	P	28.8	P		P		2.1	2.5	0.9	P		1.8	23.3			
<i>Cymbella affinis</i>													P					
<i>Cymbella cistula</i>											P							
<i>Cymbella cuspidata</i>										P								
<i>Cymbella gracilis</i>																		
<i>Cymbella minuta</i>	P	P	P	P	P			P			P	P	P	P		P		P
<i>Cymbella sp.</i>					P						P	P			P			
<i>Denticulatis tenuis</i>												P				P	3.0	
<i>Diatoma elongatum</i>	P		P	P	P	P	P	P			P			P	7.5	P		P
<i>Diploneis puella</i>			P	P														
<i>Diploneis sp.</i>						P												P
<i>Epithemia sorex</i>			P					P					P		P	P	P	
<i>Eunotia exigua</i>																		
<i>Eunotia glacialis</i>													P					
<i>Eunotia praerupta</i>				P								P					13.4	P
<i>Eunotia praerupta v. inflata</i>			P															
<i>Eunotia sp.</i>							P	P			P							
<i>Fragilaria construens</i>			P	5.4				P			P	P	P					
<i>Fragilaria crotonensis</i>				P							P	P	P					
<i>Fragilaria intermedia</i>																		
<i>Fragilaria pinnata</i>		P	P					24.8			P	P						
<i>Fragilaria sp.</i>																		
<i>Gomphonema angustatum</i>					P									P		P	P	
<i>Gomphonema constrictum</i>																		
<i>Gomphonema gracile</i>			P									P						
<i>Gomphonema intricatum v. vibrio</i>								P										
<i>Gomphonema olivaceum</i>																		
<i>Gomphonema parvulum</i>			P															
<i>Gomphonema sp.</i>				P							P	P						
<i>Hantzschia amphioxys</i>			P											P				
<i>Melosira sp.</i>													P	P				
<i>Meridion circulare</i>																		
<i>Naviculum bacillum</i>			P															
<i>Navicula cryptocephala</i>	P	P	P					P				P		P				3.9
<i>Navicula decussis</i>																		
<i>Navicula exigua</i>																		
<i>Navicula lanceolata</i>														P				
<i>Navicula mutica</i>			3.3								P							
<i>Navicula pupula</i>								P			P	P		P				P
<i>Navicula radiosa</i>	P	P	P	P				P					P			P		P
<i>Navicula reinhardtii</i>																		
<i>Navicula scandinavica</i>																		
<i>Navicula tripunctata</i>																		
<i>Navicula viridula</i>				P				P				10.7	P					
<i>Navicula sp.</i>			P									P				P	4.3	
<i>Nitzschia acicularis</i>					P							P				3.9		
<i>Nitzschia amphibia</i>			P					P			P		P					P
<i>Nitzschia angustata</i>											P							
<i>Nitzschia dissipata</i>																		
<i>Nitzschia filiformis</i>	P		P	P				11.2	P		P	P	P	P			P	P
<i>Nitzschia fonticola</i>			P					P			P	P						
<i>Nitzschia palea</i>								P										
<i>Nitzschia sigmoidea</i>			P	P								P						
<i>Nitzschia sp.</i>																		
<i>Pinnularia stomatophora</i>													P					P
<i>Pinnularia sp.</i>																		
<i>Rhizosolenia longiseta</i>	4.4			11.6	P			6.0	17.7			3.6						3.5
<i>Rhopalodia gibba</i>								P	P						89.1			
<i>Stauroneis anceps</i>			P					P	P								P	P
<i>Stauroneis sp.</i>																		
<i>Stephanodiscus astraea</i>			22.8	P	P	P	P	14.8		P	P	P		33.4	P			15.6
<i>Stephanodiscus niagarae</i>																		
<i>Surirella angustata</i>			P															
<i>Surirella ovalis</i>								P									P	P
<i>Surirella sp.</i>																		
<i>Synedra acus</i>					P													
<i>Synedra ulna</i>										P								P
<i>Synedra sp.</i>	2.3	1.1	33.4	3.7	0.5	1.4	20.6	38.0	1.5	2.5	17.6	35.4	2.6	3.0	2.7	9.2	0.4	2.7
<i>Tabellaria fenestrata</i>	20.9		P	P				63.4			P	P	P	P	P	P	P	P
<i>Tabellaria flocculosa</i>			P	P	P			179.3	P	P	7.6	P	P	12.5	6.2	P	P	P
Total Bacillariophyta	41.7	146.8	64.2	212.8	22.2	4.5	91.6	321.6	3.5	8.8	26.1	49.7	21.8	67.6	135.3	100.7	159.6	69.4

Appendix E5. Phytoplankton biomass (µg/L) in lakes of the Meliadine Study Area, 1997 and 1998.

Taxa	ML-E				ML-S				ML-W			ML-SE	PL	LML		A6			
	19-Jul-97	17-Aug-97	17-Jul-98	04-Sep-98	20-Jul-97	16-Aug-97	25-Jul-98	01-Sep-98	20-Jul-97	16-Aug-97	27-Jul-98	22-Jul-98	28-Jul-98	29-Jul-98	02-Sep-98	23-Jul-97	17-Aug-97	24-Jul-98	
Cryptophyta (Cryptomonads)																			
<i>Cryptomonas curvata</i>			P	P	5.1	P		P				P	P			22.4		P	P
<i>Cryptomonas erosa</i>				5.2															
<i>Cryptomonas ovata</i>		11.8	19.4	P	5.0	P	P	19.0	P		7.8	27.6	12.9	P	7.7		P	P	
<i>Cryptomonas reflexa</i>	7.5	6.4	11.5	11.1	6.3	5.5	19.1	19.4	7.4	1.4	10.1	26.3		38.3	33.6	32.7	8.2	50.7	
<i>Cyanomonas</i> sp.																			
<i>Katablepharis ovalis</i>	5.9	P	0.8	0.9	5.4	6.7	2.8	7.7	6.3	10.7	0.4	2.4		P		6.0	14.3	5.0	
<i>Rhodomonas minuta</i>	9.7	P	8.6	12.0	19.4	18.6	7.3	12.9	21.0	23.2	4.7	11.7	2.0	10.2	170.5	22.3	11.8	36.5	
Total Cryptophyta	23.1	18.2	40.3	29.2	41.3	30.8	29.3	59.0	34.7	35.3	23.0	68.0	15.0	48.4	234.3	61.0	34.3	92.1	
Chrysophyta (Chrysophytes)																			
<i>Bitrichia longispina</i>	0.4	P		1.1	1.5	0.8		2.5	P	0.7	0.7	5.8	1.5	P	P				
<i>Botryococcus protuberans</i>																			
<i>Chromulina</i> sp.	1.7	P	P	3.3	2.3	P	P	P		2.4				2.6	3.6	P	P	2.0	
<i>Chrysidastrum catenatum</i>		P	62.4	140.8		48.6	P	P		10.1									
<i>Chrysochromulina parva</i>	4.2	25.1	7.2	56.6	7.5	8.8	33.8	51.4	10.7	4.9	1.2	2.2	1.2	3.6	15.5	4.9	1.9	0.9	
<i>Chrysoococcus</i> sp.	7.8	4.2			1.8				1.9								P		
<i>Chrysoikos skujai</i>	1.5	2.1	1.8	2.3	2.8	6.0	3.5	4.3	0.3	0.3	4.7	10.8	0.9	1.8			1.2	P	
<i>Chrysophaerella rodheii</i>	32.5	73.6	229.4	82.0	83.6	170.5	286.0	324.7	60.2	163.4	84.1	316.3	27.2	299.0	74.2	396.1	258.2	141.8	
<i>Chrysostephanosphaera globulifera</i>		P				P		3.6	1.0	P	P								
<i>Dinobryon crenulatum</i>		7.4		84.7		14.5		38.1	P	6.5		7.4	P	14.5			6.3	13.3	
<i>Dinobryon divergens</i>	42.5	17.1	12.7	262.3	19.5	5.3	50.9	152.0	13.8	4.9	32.6	122.7	77.7	56.9	128.0	18.5	95.2	851.4	
<i>Dinobryon sertularia</i>		16.2	6.3	14.5	80.5	13.5	139.4	28.0	83.3	6.9	108.1	49.6	23.3	31.0	10.1	P	20.7	4.5	
<i>Dinobryon sertularia</i> v. <i>protuberans</i>	107.0		127.5		56.6		88.8		53.8		29.0	36.9	21.8	4.8				P	
<i>Dinobryon sociale</i>	84.5	98.6	799.4	13.2	131.3	P	200.5	162.0	103.2		222.6	154.4	114.7	38.5	37.3	25.1	29.8	33.9	
<i>Dinobryon tabellariae</i>	14.4		10.6		7.4	P	58.9	P	27.7	3.1	50.4	20.9	21.4	17.0		59.4		P	
<i>Ishmochloron trispinatum</i>			P	P															
<i>Kephyrion boreale</i>	13.1	19.2	164.0	174.9	26.5	5.3	48.9	117.6	15.2	22.0	196.3	636.9	27.3	71.5	237.9	13.1	9.2	48.8	
<i>Kephyrion</i> sp.			P				3.9				P	P	3.1	P				P	
<i>Mallomonas</i> sp.	0.4	P		7.1	3.5	P		9.6	10.1					2.8	5.9	2.4	P	11.2	
<i>Ochromonas</i> sp. a	18.5	23.7		4.2	31.7	9.2		23.9	1.4	1.5		16.7		2.5	12.7	21.8	89.1	P	
<i>Ochromonas</i> sp. b		P		P					P	P					P	1.4	P	2.1	
<i>Ochromonas stellaris</i>			P											P	16.3				
<i>Ophiocytium</i> sp.			P								P								
<i>Pseudokephyrion</i> sp.	3.4		4.1		1.6		7.8	1.6			2.5	8.1	0.5	P				1.6	
<i>Stelemonas</i> sp.												0.7							
<i>Stichogloea doederleinii</i>		2.1		P	2.8	2.5	P	51.7	7.7	2.1	3.4	3.4	2.6	5.9	9.9	11.5	7.8	10.7	
<i>Synura</i> sp.	P	P	2.8	P	P	P	P	P				19.8	P	P					
Unidentified Chrysophyta colony			P									16.6	5.2	5.6	P	5.2	P	14.7	
Unidentified statospore			P	19.1	P		P	7.4											
Total Chrysophyta	331.8	289.2	1447.1	846.9	461.0	285.0	929.8	970.9	390.3	228.8	752.4	1417.8	328.9	552.4	556.5	554.1	519.5	1136.8	
Pyrophyta (Dinoflagellates)																			
<i>Glennodinium</i> sp.	9.7	9.4	2.3	7.3	1.9	7.1	3.5	48.2	6.0	7.8	6.7	5.7	P	P	5.2	17.9	6.0	3.0	
<i>Gymnodinium</i> sp.			16.1	P				P	42.5		P	4.2	11.0	P		P		P	
<i>Gymnodinium helveticum</i>	29.5	P	P	P	P	P	3.7		P	P	P	71.9	P	P				P	
<i>Gymnodinium uberrimum</i>	27.9	44.7	P	P	P	P	P	P		24.2	P	P	42.5	P		P	44.8	94.6	
<i>Peridinium</i> sp.			53.1									P	P						
<i>Peridinium aciculiferum</i>	7.1	6.4	23.4	P	25.6	46.3	22.9	64.8		17.2	1.7	35.0	P	42.8	P		46.7	17.6	
<i>Peridinium cinctum</i>												P						P	
Unidentified cyst	P		140.9		25.1	25.2			P	P						13.5	P		
Total Pyrophyta	74.2	60.6	235.8	7.3	52.6	78.5	30.2	155.5	6.0	49.2	12.6	112.6	53.5	42.8	5.2	31.4	97.5	115.1	
Euglenophyta (Euglenoids)																			
<i>Leppocinlis</i> sp.					2.1														
<i>Trachelomonas</i> sp.				P											P				
Total Euglenophyta					2.1														
Chlorophyta (Green Algae)																			
<i>Ankistrodesmus convolutus</i>			P		0.0			282.3				P		0.2	6.0	0.4	2.5		
<i>Ankistrodesmus falcatus</i>						0.0				P				P		0.1	0.1		
<i>Ankistrodesmus falcatus</i> v. <i>spiralis</i>					P													0.9	
<i>Ankistrodesmus gelifactus</i>	0.4	0.2			0.3	0.3			0.7	0.2						2.3	0.7		
<i>Arthrodesmus triangularis</i>	6.6	2.8		4.1	3.9	P	P		11.5	P		P	P		3.9				
<i>Binuclearia</i> sp.																			
<i>Botryococcus</i> sp.				P									P	P					
<i>Chlamydomonas</i> sp. a				41.9				10.3					3.4			P	2.4		
<i>Chlamydomonas</i> sp. b		P	P	0.9	1.2	P		3.4	12.6					1.1			5.1	P	
<i>Chlamydomonas sagittula</i>					3.6														
<i>Coelastrum microporum</i>																			
<i>Coelastrum sphaericum</i>																			
<i>Closterium</i> sp.																			
<i>Cosmarium biculatum</i>				P									P						
<i>Cosmarium botrytis</i>																			
<i>Cosmarium capitulum</i> v. <i>groenlandicum</i>							2.2	P					P	11.0				P	
<i>Cosmarium depressum</i>													P						
<i>Cosmarium granulatum</i>							P											P	
<i>Cosmarium humile</i> v. <i>lacustre</i>																			
<i>Cosmarium impressulum</i> v. <i>suborthogonum</i>															P				
<i>Cosmarium laeve</i>						P													
<i>Cosmarium norinbergense</i>																			
<i>Cosmarium phaseolus</i> v. <i>phaseolus</i>															2.2				
<i>Cosmarium reniforme</i>								P				P			P				
<i>Cosmarium septentrionale</i>																			
<i>Cosmarium speciosum</i>					P	P										P			
<i>Cosmarium subgranulata</i>																P			
<i>Cosmarium turpinii</i>																			
<i>Crucigenia quadrata</i>	P	P		P	2.2	P			P	0.6		P	P	P	P	0.2		P	
<i>Crucigenia rectangularis</i>	P	P		P	3.7	0.9		P									P		
<i>Cylindrocystis</i> sp.																	21.2	P	
<i>Elakatothrix gelatinosa</i>			P	5.2		0.1	0.9	1.8			0.3	P	0.4	2.0	0.3			5.6	
<i>Euastrum dubium</i> v. <i>maius</i>																	P		
<i>Euastrum elegans</i>	P			P														P	
<i>Gemmelicystis neglecta</i>																			
<i>Gloeoecystis schroeteri</i>	8.4	70.0		19.2	15.5	19.4	4.5		10.3	7.4		67.2	P	P		22.3	10.8	15.5	
<i>Golenkinia radiata</i> v. <i>brevispina</i>								1.5								P	5.7	3.2	

Appendix E5. Phytoplankton biomass (µg/L) in lakes of the Meliadine Study Area, 1997 and 1998.

Taxa	ML-E				ML-S				ML-W			ML-SE	PL	LML		A6		
	19-Jul-97	17-Aug-97	17-Jul-98	04-Sep-98	20-Jul-97	16-Aug-97	25-Jul-98	01-Sep-98	20-Jul-97	16-Aug-97	27-Jul-98	22-Jul-98	28-Jul-98	29-Jul-98	02-Sep-98	23-Jul-97	17-Aug-97	24-Jul-98
<i>Gonatozygon montae</i>				4.0			P	3.1			1.7			4.7	10.6			5.1
<i>Kirchneriella lunaris</i>														P	0.9			P
<i>Kirchneriella</i> sp.	0.0															0.0		
<i>Koliella longisetta</i>																		
<i>Lagerheimia quadrisetta</i>					0.1								P					
<i>Micractinium pusillum</i>												1.4			P			
<i>Monoraphidium</i> sp.												1.3	P					
<i>Mougeotia</i> sp. a	7.4	7.9			1.2	4.9	2.5	0.2		1.5	P			0.2				
<i>Mougeotia</i> sp. b			3.6	5.3			P	5.2			1.2	10.7		P	3.3			P
<i>Nephroclytium limneticum</i>		0.2			1.6	1.2			0.2	1.1						2.7	3.2	
<i>Oocystis elliptica</i>	31.7	30.6			P					1.1						3.4	20.3	
<i>Oocystis lacustris</i>	0.0	0.0	19.3	91.8	2.3	3.7	10.4	135.4	0.0	0.0	1.5	22.9	2.5	12.9	11.6	0.1	14.5	18.6
<i>Oocystis pusilla</i>									1.7									
<i>Oocystis solitaria</i>													7.1	P	9.8			P
<i>Quadrifuga closterioides</i>		4.0		2.3	0.3	1.2				P	0.3					0.5		
<i>Pandorina morum</i>		P																
<i>Pediastrum boryanum</i>			39.6	P								P					16.0	
<i>Pediastrum integrum</i> v. <i>scutum</i>																		
<i>Pediastrum tetras</i>					P	P	0.8	3.3				P		P	2.4			
<i>Scenedesmus acuminatus</i>						0.3	P											1.0
<i>Scenedesmus bijuga</i>																		P
<i>Scenedesmus ecomis</i>																		P
<i>Scenedesmus incrassatulus</i>		P			P			1.9			0.2	P		2.7	P	1.8	P	P
<i>Scenedesmus quadricauda</i>																		
<i>Sphaerocystis schroeteri</i>			13.9	45.7			9.6	35.7			3.0	11.5	3.9	14.0	16.5			20.8
<i>Staurastrum anatinum</i> v. <i>biradiatum</i>				P														
<i>Staurastrum apiculatum</i>																		
<i>Staurastrum borgeanum</i>													P					
<i>Staurastrum brebissoni</i>				P														
<i>Staurastrum cyrtocerum</i>																15.2		P
<i>Staurastrum dejectum</i>			14.2		P							P		P	P			P
<i>Staurastrum lunatum</i>																		
<i>Staurastrum paradoxum</i>											P							
<i>Staurastrum tetracerum</i>																		
<i>Staurastrum</i> sp.		P		P	P													
<i>Teilingia granulata</i>	1.3	P	3.6	4.0	6.0	4.5	P		1.7	6.1	0.7	2.9	P	6.3		1.1	26.8	16.2
<i>Tetraedron arthrodesmiforme</i>			P				P	1.0				0.4	P	0.3	0.2			2.0
<i>Tetraedron minimum</i>		P	P	P	3.5	P					P		P			3.4	2.0	3.0
<i>Tetraedron muticum</i>																		1.0
<i>Tetraedron</i> sp.		P				1.0						P		3.3		2.8	1.1	P
<i>Tetrastrum caudatum</i>																		
<i>Tetrastrum arthrodesmiforme</i>	P	P			0.2	P			0.1							0.9	1.3	
<i>Zygnema</i> sp.																		
Unidentified flagellate				8.5														
<i>Xanthidium antilopaeum</i>														P	4.0			
Total Chlorophyta	55.8	115.8	94.2	232.9	45.5	37.6	30.8	485.0	40.1	16.8	9.2	118.5	17.4	63.3	73.5	57.2	134.6	91.9
Cyanobacteria																		
<i>Agmenellum quadruplicatum</i>							P								0.5			P
<i>Agmenellum thermale</i>																		
<i>Anabaena azollae</i>									P									
<i>Anabaena planctonica</i>		P					P				P							
<i>Anabaena</i> sp.	P	3.2		24.9	0.9			P		0.4		P		P			1.7	
<i>Anacystis marina</i>			3.0	0.4			P				2.7	3.5		2.6	20.7			1.0
<i>Anacystis montana</i>															0.4			
<i>Aphanizomenon flos-aquae</i>																		
<i>Aphanocapsa elachista</i>					P	P											0.2	
<i>Aphanocapsa elachista</i> v. <i>planctonica</i>	0.3		1.1		0.1		5.9	P		7.3	1.1	0.4		3.4			2.9	P
<i>Aphanothece clathrata</i>	1.9	1.1		3.9	0.2	0.2		3.8	0.9	0.2			1.8			0.1	3.2	0.3
<i>Chlorogloea microcystoides</i>																		
<i>Chroococcus turgidus</i>	P	P	P							1.1	P	0.9	P	P		2.3	1.3	7.5
<i>Coelosphaerium kuetzingianum</i>		0.6			0.9	P			P	0.3								
<i>Dactylococcopsis linearis</i>			P	0.7			0.8											P
<i>Desmonema wrangellii</i>		P																
<i>Dichotrix gypsophila</i>		P						P				P	P					
<i>Gomphosphaeria lacustris</i>		P		2.7	P	P		0.2				P	P			20.7	5.5	P
<i>Lynngbya contorta</i>																		
<i>Lynngbya limnetica</i>				P						P		0.8				0.8		
<i>Microcoleus vaginatus</i>																		
<i>Microcystis flos-aquae</i>	P															2.4	22.2	3.6
<i>Nostoc commune</i>																		
<i>Oscillatoria limnetica</i>			0.2		0.2		0.3	P			0.3							P
<i>Pseudanabaena</i> sp.			1.4				P				1.4							
<i>Schizothrix calcicola</i>																		
<i>Stigonema mammosum</i>																		
Total Cyanobacteria	2.3	4.9	5.8	32.6	2.3	0.2	6.9	4.0	8.2	3.0	4.8	5.1	1.8	5.9	22.4	26.7	40.5	8.9
Total Algal Biomass (µg/L)	528.9	635.5	1887.4	1361.7	627.1	436.7	1118.5	1996.0	482.9	341.9	828.0	1771.9	438.3	780.5	1027.2	831.1	985.9	1514.3
Total Number of Taxa Per Sample	56	65	75	78	73	63	67	80	46	52	68	83	59	66	70	64	72	77

Note: P = present but not encountered in routine cell counts.

Appendix E5. Phytoplankton biomass (µg/L) in lakes of the Meliadine Study Area, 1997 and 1998.

Taxa	A8			B2				B5				B7				D7		G2	
	22-Jul-97	18-Aug-97	23-Jul-98	21-Jul-97	18-Aug-97	21-Jul-98	30-Aug-98	19-Jul-97	18-Aug-97	20-Jul-98	28-Aug-98	18-Jul-97	19-Aug-97	19-Jul-98	22-Aug-98	17-Jul-97	19-Aug-97	24-Jul-97	22-Aug-97
Bacillariophyta (Diatoms)																			
<i>Achnanthes detha</i>											P								
<i>Achnanthes exigua</i>		P																	
<i>Achnanthes flexella</i>	P	P	P			P		P		P		P		P	P	P			P
<i>Achnanthes lanceolata</i>																			
<i>Achnanthes minutissima</i>	0.5	P	P	P	P	P	0.8		2.0	3.4	P		P	2.4	P	P	P	P	
<i>Achnanthes minutissima v. cryptocephala</i>	P	P			P	P			P		P			P	P	P	P	P	
<i>Amphipleura pellucida</i>			P											P					
<i>Amphora ovalis</i>			P				P								P				
<i>Amphora ovalis v. pediculus</i>																P			
<i>Anomoeoneir vitrea</i>										P									
<i>Asterionella formosa</i>		P								P									
<i>Cocconeis placentula</i>		P																	
<i>Cocconeis diminuta</i>														P					
<i>Cocconeis sp.</i>															P				
<i>Cyclotella antiqua</i>						P				P				22.0	54.4				
<i>Cyclotella bodanica</i>	777.2	P		3.5	7.0			2.0	13.9			23.3	3.6			10.0			
<i>Cyclotella comta</i>							37.3							P	150.3				
<i>Cyclotella glomerata</i>	9.1	0.4			39.8					P	9.5					2.6	1.3	5.3	
<i>Cyclotella kutzingiana</i>							38.7				20.6	2.3	3.6		14.3			5.6	
<i>Cyclotella meneghiniana</i>		15.3	55.0													P		25.9	
<i>Cyclotella ocellata</i>			41.2			P	1.5				43.5			3.6				5.1	
<i>Cymbella affinis</i>		P				P	6.4								P	P	P		
<i>Cymbella cistula</i>			P																
<i>Cymbella cuspidata</i>																	P		
<i>Cymbella gracilis</i>											P								
<i>Cymbella minuta</i>	P	P	P	P		P				P	P			P	0.6	P	0.6	P	
<i>Cymbella sp.</i>			P				P				P								
<i>Denticulatis tenuis</i>	3.1	3.1	P				8.8												
<i>Diatoma elongatum</i>			P			P	P	P		P	P			P	P	P	P		
<i>Diploneis puella</i>						P				P									
<i>Diploneis sp.</i>																		P	
<i>Epithemia sorex</i>						P					P				P			P	
<i>Eunotia exigua</i>			P																
<i>Eunotia glacialis</i>																			
<i>Eunotia praeurupta</i>			P																
<i>Eunotia praeurupta v. inflata</i>																			
<i>Eunotia sp.</i>	P									P					4.7				
<i>Fragilaria construens</i>						P	P												
<i>Fragilaria crotonensis</i>	1.5	P				P			P	P	P			P	8.8		P	P	
<i>Fragilaria intermedia</i>											1.6								
<i>Fragilaria pinnata</i>			P			P	P			P	P			P	P	6.6	4.2	P	
<i>Fragilaria sp.</i>	P									P									
<i>Gomphonema angustatum</i>		P														P			
<i>Gomphonema constrictum</i>					P														
<i>Gomphonema gracile</i>			P				P								P				
<i>Gomphonema intricatum v. vibrio</i>																			
<i>Gomphonema olivaceum</i>											P								
<i>Gomphonema parvulum</i>																			
<i>Gomphonema sp.</i>										P									
<i>Hantzschia amphioxys</i>																		P	
<i>Melosira sp.</i>																			
<i>Meridion circulare</i>		P																	
<i>Naviculum bacillum</i>			P														P		
<i>Navicula cryptocephala</i>		P	P			P	P			P	5.6	0.8	P	P	7.3	P	P	P	
<i>Navicula decussis</i>		P																	
<i>Navicula exigua</i>																	P		
<i>Navicula lanceolata</i>						P	P												
<i>Navicula mutica</i>										P					P				
<i>Navicula pupula</i>			P																
<i>Navicula radiosa</i>		P								P	P					P	P	P	
<i>Navicula reinhardtii</i>																			
<i>Navicula scandinavica</i>																P			
<i>Navicula tripunctata</i>																P	P		
<i>Navicula viridula</i>			P			P					P				P	P	P		
<i>Navicula sp.</i>					P										P	P			
<i>Nitzschia acicularis</i>							P												
<i>Nitzschia amphibia</i>		P					P			P					P				
<i>Nitzschia angustata</i>																			
<i>Nitzschia dissipata</i>																			
<i>Nitzschia filiformis</i>			10.7					P		P	P				P	P			
<i>Nitzschia fonticola</i>						P				P	P				P	P			
<i>Nitzschia palea</i>																			
<i>Nitzschia sigmoidea</i>		P																	
<i>Nitzschia sp.</i>		P	P									P							
<i>Pinnularia stomatophora</i>													P						
<i>Pinnularia sp.</i>		P																	
<i>Rhizosolenia longiseta</i>	11.2		20.1					P	6.2	10.9					1.7			1.8	
<i>Rhopalodia gibba</i>																			
<i>Stauroneis anceps</i>								P							P	P	P	P	
<i>Stauroneis sp.</i>		P																	
<i>Stephanodiscus astraea</i>		29.2	20.2								44.5								
<i>Stephanodiscus niagarae</i>																			
<i>Surirella angustata</i>																			
<i>Surirella ovalis</i>																P			
<i>Surirella sp.</i>																			
<i>Synedra acus</i>																			
<i>Synedra ulna</i>			P												4.4				
<i>Synedra sp.</i>	2.6	4.2	19.8	2.5	3.6	4.5	P	8.9	8.7	57.8	59.8	2.7	5.1	16.0	4.1	10.0	17.7	3.6	
<i>Tabellaria fenestrata</i>			P				P				P			P		13.4		P	
<i>Tabellaria flocculosa</i>	P	P		P		P	P	P	P	P	P	P	P	P	7.8	P	2.3	72.7	
Total Bacillariophyta	805.2	52.2	167.0	6.0	50.4	4.5	93.5	10.8	30.8	72.1	185.1	29.1	12.3	31.6	253.4	26.5	40.7	63.8	89.5

Appendix E5. Phytoplankton biomass (µg/L) in lakes of the Meliadine Study Area, 1997 and 1998.

Taxa	A8			B2				B5				B7				D7		G2	
	22-Jul-97	18-Aug-97	23-Jul-98	21-Jul-97	18-Aug-97	21-Jul-98	30-Aug-98	19-Jul-97	18-Aug-97	20-Jul-98	28-Aug-98	18-Jul-97	19-Aug-97	19-Jul-98	22-Aug-98	17-Jul-97	19-Aug-97	24-Jul-97	22-Aug-97
Cryptophyta (Cryptomonads)																			
<i>Cryptomonas curvata</i>		9.7					P	8.1		P	13.5	P	P	9.7	71.7		6.3	7.5	P
<i>Cryptomonas erosa</i>																P			
<i>Cryptomonas ovata</i>	P	8.6	P		2.2	P	P	P	13.9	25.1	14.8	P		P	14.4	5.6	9.9	P	2.9
<i>Cryptomonas reflexa</i>	43.8	71.6	12.4	4.0	33.0	31.0	30.1	39.4	8.1	59.8	37.0	47.3	12.3	272.4	31.2	5.0	41.0	27.4	25.1
<i>Cyanomonas</i> sp.														P					
<i>Katablepharis ovalis</i>	5.3	4.9	12.8	19.1	14.8	0.8	11.4	21.1	21.5	24.4	13.6	2.5	5.9	19.1	25.4	3.8	12.3	7.2	9.0
<i>Rhodomonas minuta</i>	22.9	15.8	18.7	10.9	19.9	32.3	16.4	56.7	10.9	41.2	24.6	25.7	8.1	24.7	19.7	11.9	31.8	22.0	14.2
Total Cryptophyta	72.0	110.7	43.9	33.9	69.9	64.1	57.9	125.3	54.4	150.5	103.5	75.5	26.3	325.8	162.4	26.3	101.3	64.2	51.2
Chrysophyta (Chrysophytes)																			
<i>Bitrichia longispina</i>				0.8		P	P	0.4	0.7		P			0.7	6.1				
<i>Botrycoccus protuberans</i>																10.9			
<i>Chromulina</i> sp.	5.0	1.9		4.4	1.9		P	P	1.4		3.1		P		5.8			4.7	P
<i>Chrysidastrum catenatum</i>					0.7		73.3		49.3		26.7		12.2		25.5			36.5	
<i>Chrysochromulina parva</i>	9.4	9.7	0.5	9.7	30.0	0.7	20.7	49.7	10.6	1.4	44.3	21.8	3.8	2.0	14.3	4.5	4.3	16.3	8.6
<i>Chrysococcus</i> sp.		1.4		82.9				14.3	4.2			22.6				5.8		15.8	1.1
<i>Chrysoikos skujai</i>	P	P	5.5	P	7.5		P		1.8	19.0	1.7			39.5	2.8	P	3.6	0.6	
<i>Chrysoisphaerella rodheii</i>	413.5	162.3	315.7	1053.1	153.0	693.8	671.6	84.2	541.5	638.0	23.9	144.4	608.8	42.2	835.0	722.5	162.2	402.7	173.4
<i>Chrysostephanosphaera globulifera</i>																		P	6.7
<i>Dinobryon crenulatum</i>		P	22.7		37.7	7.7	61.3		41.3	19.8	68.4		2.4	34.1	55.8	P	4.5		
<i>Dinobryon divergens</i>	P	16.9	245.8	26.5	9.1	162.4	1251.1	72.8	17.9	363.7	P	P	12.5	216.8	32.9	113.0	5.7	P	115.5
<i>Dinobryon sertularia</i>	39.2	69.6	552.3	P	38.0	40.8	12.2	30.9	147.3	401.1	70.7	12.2	3.7	633.7	11.0	132.2	30.5	53.9	23.5
<i>Dinobryon sertularia</i> v. <i>protuberans</i>	P		372.1						4.0	P		P				23.6			3.7
<i>Dinobryon sociale</i>		3.2	533.7	16.8	12.6	36.8		668.3	9.3	215.8	135.6	2.2	25.8	174.6	13.5	118.7	12.0	9.8	29.4
<i>Dinobryon tabellariae</i>						P		6.4	P	50.9				P		10.9	5.6	4.2	
<i>Ishtmochloron trispinatum</i>								P	P				P	P				P	
<i>Kephyrion boreale</i>	109.4	41.1	77.4	1.6	57.8	24.2	147.9	19.2	76.3	253.6	103.0	7.8	14.8	582.3	207.3	65.8	155.5	53.8	52.8
<i>Kephyrion</i> sp.			26.2							8.4									
<i>Mallomonas</i> sp.	2.1	P	P	P	6.0		9.3	2.8	P	P		1.9	1.8			P	1.9		P
<i>Ochromonas</i> sp. a	76.2	11.5			7.4		38.4	118.8	89.8	P	49.5		6.4	P	10.8	28.9	33.0		30.6
<i>Ochromonas</i> sp. b												P			4.0				
<i>Ochromonas stellaris</i>										P	21.5								
<i>Ophiocyrtium</i> sp.																			
<i>Pseudokephyrion</i> sp.	P		1.5			1.6	P			10.1	P			2.0	4.0		6.3	2.3	
<i>Stelexmonas</i> sp.																			
<i>Stichogloea doederleinii</i>	19.9	P	6.1	15.6	2.9	108.8	7.1	3.1	3.0	19.0		P	5.4	30.5	33.6		25.0	3.9	1.3
<i>Synura</i> sp.							P	P		10.4				P		28.2	4.4		1.1
Unidentified Chrysophyta colony		P						P	P	12.0									
Unidentified statospore	P	P	91.6		P	P	14.8							137.7	P	P			
Total Chrysophyta	669.8	320.7	2253.1	1211.3	352.1	1052.5	2344.4	1070.8	998.6	2023.2	548.3	212.8	697.6	1896.0	1262.4	1256.0	505.2	567.9	447.8
Pyrophyta (Dinoflagellates)																			
<i>Glenodinium</i> sp.	15.3	5.7	P	5.0	7.2	4.8	24.8	37.6	3.1	23.3	25.0		4.2	9.4	P	10.8	5.8	2.1	14.2
<i>Gymnodinium</i> sp.			P		P	34.4	P		118.4	190.4	112.1				P		45.4		
<i>Gymnodinium helveticum</i>								P								P			
<i>Gymnodinium uberrimum</i>	P	39.6	359.3	P	P		P		44.6	P			376.8	P	P			30.1	P
<i>Peridinium</i> sp.				56.7					134.6		P								
<i>Peridinium aciculiferum</i>	6.2	75.4	P		90.3	21.3	28.2	194.4	240.7	P	171.2	P	50.7	5.6	70.5	152.0	257.1	88.7	221.0
<i>Peridinium cinctum</i>		P			P					P					P				
Unidentified cyst			P	P									11.0			P			P
Total Pyrophyta	21.5	120.7	359.3	61.7	97.5	60.6	53.0	232.0	541.4	213.7	308.3	442.8	15.1	70.5	162.9	308.4	120.8	235.2	
Euglenophyta (Euglenoids)																			
<i>Leppocinlis</i> sp.																			
<i>Trachelomonas</i> sp.											84.9								
Total Euglenophyta											84.9								
Chlorophyta (Green Algae)																			
<i>Ankistrodesmus convolutus</i>	0.7	8.8	2.3		0.1		0.2	0.1	P	P	P		0.1	1.5			P		
<i>Ankistrodesmus falcatus</i>	P	0.0	P	0.2	P	P	P	0.2	P			0.4	P		1.2		P	0.3	0.1
<i>Ankistrodesmus falcatus</i> v. <i>spiralis</i>	P	0.2				P						1.0	1.0		P	2.0	0.3	0.8	4.1
<i>Ankistrodesmus gelifactus</i>	2.3	1.2		0.8	1.1			1.7	0.7			2.2	0.6			P	1.7		0.0
<i>Arthrodesmus triangularis</i>							P	P			P	P			P				
<i>Binuclearia</i> sp.														P					
<i>Botrycoccus</i> sp.						P				P	P				P				
<i>Chlamydomonas</i> sp. a	4.0	2.6	P		0.7	P	26.9		8.1	5.5	59.3	0.3	0.3		30.6	0.3		0.3	0.8
<i>Chlamydomonas</i> sp. b		P				P	1.1	3.9	36.1	2.6	P		14.1	P	2.6	5.1	1.6	3.6	
<i>Chlamydomonas sagittula</i>				0.2													0.3		
<i>Coelastrum microporum</i>			20.7			31.8					P				P				
<i>Coelastrum sphaericum</i>														P					
<i>Closterium</i> sp.											P				P				
<i>Cosmarium bicalatum</i>						12.9	P								P				
<i>Cosmarium botrytis</i>																			
<i>Cosmarium capitulum</i> v. <i>groenlandicum</i>			P			P					P				P				
<i>Cosmarium depressum</i>			110.3																
<i>Cosmarium granulatum</i>				P										24.4					
<i>Cosmarium humile</i> v. <i>lacustre</i>							P				P				9.7				
<i>Cosmarium impressulum</i> v. <i>suborthogonum</i>						P					P				P				
<i>Cosmarium laeve</i>											P								
<i>Cosmarium norinbergense</i>						P						P	P					P	
<i>Cosmarium phaseolus</i> v. <i>phaseolus</i>											P				P				
<i>Cosmarium reniforme</i>			P												P				
<i>Cosmarium septentrionale</i>						P													
<i>Cosmarium speciosum</i>	P	30.5			P		P	38.0	25.9			P	P						P
<i>Cosmarium subgranulata</i>											P								
<i>Cosmarium turpinii</i>			22.7																
<i>Crucigenia quadrata</i>			1.0	P		5.9	P	3.0	P	2.8	1.0	4.6	P		P	P	1.2	0.2	1.0
<i>Crucigenia rectangularis</i>			75.2	5.5	P	19.3		3.7	P		P	P		4.0		P	2.2	4.0	
<i>Cylindrocystis</i> sp.																			
<i>Elakatothrix gelatinosa</i>	P		P			4.8	3.3	1.1		1.8	1.0		0.5	4.5	1.0				
<i>Euastrum dubium</i> v. <i>maius</i>	P	P										P							

Appendix E5. Phytoplankton biomass (µg/L) in lakes of the Meliadine Study Area, 1997 and 1998.

Taxa	A8			B2				B5				B7				D7		G2	
	22-Jul-97	18-Aug-97	23-Jul-98	21-Jul-97	18-Aug-97	21-Jul-98	30-Aug-98	19-Jul-97	18-Aug-97	20-Jul-98	28-Aug-98	18-Jul-97	19-Aug-97	19-Jul-98	22-Aug-98	17-Jul-97	19-Aug-97	24-Jul-97	22-Aug-97
<i>Gonatozygon montae</i>		P																	
<i>Kirchneriella lunaris</i>	0.2	0.2	0.2	9.7	P	5.0	6.0	0.1	0.0	5.3	5.1	0.1		2.9	22.4				P
<i>Kirchneriella</i> sp.						1.4	0.6				0.2				0.7	P	P		
<i>Koliella longisetta</i>																0.6			
<i>Lagerheimia quadrisetta</i>				P	0.1	0.4	P			P									
<i>Micractinium pusillum</i>																			
<i>Monoraphidium</i> sp.																			
<i>Mougeotia</i> sp. a	1.8							P		P				0.4		6.5	0.4	10.1	
<i>Mougeotia</i> sp. b		P				P					P			P					
<i>Nephrocylum limneticum</i>	P	1.3		P	2.8							15.9	8.1		12.0	16.0			1.3
<i>Oocystis elliptica</i>	32.6	53.0		8.6	92.8			58.8				25.9	19.2		P	80.5	25.3		
<i>Oocystis lacustris</i>	83.7	0.1	9.3	19.6	66.7			34.3	34.5	91.5	160.3	92.8	30.7	120.4	258.6	40.5	50.2	88.5	19.2
<i>Oocystis pusilla</i>			0.3			44.8	30.4												
<i>Oocystis solitaria</i>						86.8	P												
<i>Quadrigula closterioides</i>		P				P	P		0.9		P	2.8	2.6		5.7				P
<i>Pandorina morum</i>	P																		
<i>Pediastrum boryanum</i>							P				P	P			P				
<i>Pediastrum integrum</i> v. <i>scutum</i>																			P
<i>Pediastrum tetras</i>	P			2.8	1.5	11.0	4.4	1.9	2.8	P	1.7	P	2.0	1.4	6.3	1.6	1.3	1.8	2.4
<i>Scenedesmus acuminatus</i>														P					
<i>Scenedesmus bijuga</i>	P		P	1.3	1.1	P		0.3	1.6	1.4			0.6	1.7		1.4	1.4	0.8	4.1
<i>Scenedesmus ecomis</i>																			
<i>Scenedesmus incrassatulus</i>	1.2	1.4	1.9	3.5	0.6	P	1.6	P	P	1.4	1.0	3.4	6.4	1.4	2.5	1.3	2.0	P	P
<i>Scenedesmus quadricauda</i>				P		P	P	1.7	1.0	3.6	P			P	P	2.0		1.4	0.9
<i>Sphaerocystis schroeteri</i>			21.1			53.2	40.7			76.3	29.6			65.2	88.8				
<i>Staurastrum anatinum</i> v. <i>biradiatum</i>						P													
<i>Staurastrum apiculatum</i>																			19.0
<i>Staurastrum borgeanum</i>											P								
<i>Staurastrum brebissoni</i>															P				
<i>Staurastrum cyrtocerum</i>																			
<i>Staurastrum dejectum</i>								P		P				11.9					P
<i>Staurastrum lunatum</i>																			
<i>Staurastrum paradoxum</i>																			
<i>Staurastrum tetracerum</i>											P								P
<i>Staurastrum</i> sp.				2.6		59.9	P	P	18.2					37.5	P		37.9	P	P
<i>Teilingia granulata</i>	0.4	4.3	6.9	P	19.2	12.3	5.0	6.1	5.1	7.3	11.5	2.6	32.5	29.3	13.3	P	3.8	2.4	1.2
<i>Tetraedron arthrodesmiforme</i>			5.0			1.9	0.1			8.6	4.2			4.7	2.7				
<i>Tetraedron minimum</i>	P	P	P	1.5	2.2	P	3.8	P	0.2	P	5.9	P	P	P	5.1	P	P	1.6	0.8
<i>Tetraedron muticum</i>			P				P			P	P			1.4	4.5		0.5	P	2.8
<i>Tetraedron</i> sp.	1.2	2.3	P	P		9.3		2.1	1.2	P	P	P		P	3.5	P			
<i>Tetrastrum caudatum</i>					P									0.4					0.2
<i>Tetrastrum arthrodesmiforme</i>	2.4	2.2		0.6	0.3			4.6	0.6			2.8	P			0.4	0.2		1.0
<i>Zygnema</i> sp.																			
Unidentified flagellate							15.1								P				
<i>Xanthidium antilopaeum</i>															11.6				
Total Chlorophyta	139.9	137.6	278.4	63.7	212.1	371.0	145.0	222.2	138.5	208.1	292.3	178.0	175.0	323.9	477.2	73.6	367.9	180.7	64.5
Cyanobacteria																			
<i>Agmenellum quadriplacatum</i>				0.6				P	P					P	0.6				P
<i>Agmenellum thermale</i>																			
<i>Anabaena azollae</i>																			
<i>Anabaena planctonica</i>															P	6.6			1.8
<i>Anabaena</i> sp.				168.0	43.4	P	7.1				P			4.8	P	0.4	0.5		P
<i>Anacystis marina</i>			5.8							0.7				5.4					
<i>Anacystis montana</i>						17.6	2.7							5.8					
<i>Aphanizomenon flos-aquae</i>												P							P
<i>Aphanocapsa elachista</i>		P													P		P	0.1	
<i>Aphanocapsa elachista</i> v. <i>planctonica</i>	0.8			2.4	1.4	3.1	33.7	4.1	0.4	P		3.5	0.3			1.1		10.6	1.3
<i>Aphanothece clathrata</i>	1.0	2.1	P	4.6	13.4				0.8		19.2	2.2	3.6		17.1			1.6	0.0
<i>Chlorogloea microcystoides</i>								0.1											
<i>Chroococcus turgidus</i>	1.8	P	P	5.9	P	11.9	18.2	2.1	2.8	30.0	17.5	13.9	13.5	5.1	49.2			6.8	
<i>Coelosphaerium kuetzingianum</i>	4.2	P		0.4				1.4	5.6				P	1.6		2.2	0.1	4.3	P
<i>Dactylococopsis linearis</i>						P				P					P			P	P
<i>Desmonema wrangelii</i>																			
<i>Dichotrix gypsophila</i>							P				P				P				
<i>Gomphosphaeria lacustris</i>	P	P	P	24.4	7.4	14.7	39.2	P	2.5	P	48.0	20.3	8.6	8.1	15.9	P	0.6	4.2	36.9
<i>Lyngbya contorta</i>													0.6						P
<i>Lyngbya limnetica</i>		P						1.3			P	0.9				P	P		
<i>Microcoleus vaginatus</i>					P					0.7				P		P	4.2		
<i>Microcystis flos-aquae</i>														P					
<i>Nostoc commune</i>																			
<i>Oscillatoria limnetica</i>			P	P	P	P	P				P				P			0.7	P
<i>Pseudanabaena</i> sp.	0.1	P	P			P									P			P	
<i>Schizothrix calcicola</i>			P																
<i>Stigonema mammosum</i>																			
Total Cyanobacteria	7.9	2.1	5.8	206.4	65.6	47.3	100.9	9.0	13.5	31.6	84.8	40.8	28.1	36.9	84.5	3.8	5.4	28.2	41.1
Total Algal Biomass (µg/L)	1716.3	744.0	3107.4	1583.0	847.5	1600.0	2794.8	1670.1	1777.1	2699.2	1607.2	536.1	1382.1	2629.2	2310.5	1549.0	1328.9	1025.6	929.2
Total Number of Taxa Per Sample	59	79	78	54	56	83	84	65	71	84	91	53	66	81	96	81	84	74	66

Note: P = present but not encountered in routine cell counts.

Appendix E6. Phytoplankton density (No. cells/mL) in lakes of the Meliadine Study Area, 1997 and 1998.

Taxa	ML-E				ML-S				ML-W			ML-SF	PL	LML		A6		
	19-Jul-97	17-Aug-97	17-Jul-98	04-Sep-98	20-Jul-97	16-Aug-97	25-Jul-98	01-Sep-98	20-Jul-97	16-Aug-97	27-Jul-98	22-Jul-98	28-Jul-98	29-Jul-98	02-Sep-98	23-Jul-97	17-Aug-97	24-Jul-98
Bacillariophyta (Diatoms)																		
<i>Achnanthes detha</i>												P	P	P			P	P
<i>Achnanthes exigua</i>																		
<i>Achnanthes flexella</i>																		
<i>Achnanthes lanceolata</i>																		
<i>Achnanthes minutissima</i>		P	5	P	3	P	4											
<i>Achnanthes minutissima</i> v. <i>cryptocephala</i>		P		P						5	P	P		P	P	P	27	7
<i>Amphipleura pellucida</i>							P										P	P
<i>Amphora ovalis</i>			P				P											
<i>Amphora ovalis</i> v. <i>pediculus</i>																		
<i>Anomoeoneis vitrea</i>			P				P											
<i>Asterionella formosa</i>		262	11	409	P	P	P	78	P	P	P	P	P	23	5		P	
<i>Cocconeis placentula</i>																	P	
<i>Cocconeis diminuta</i>																		
<i>Cocconeis</i> sp.								P				P						
<i>Cyclotella antiqua</i>																		
<i>Cyclotella bodanica</i>	2	P			14	10			P	5							P	7
<i>Cyclotella comta</i>				2							P				2			
<i>Cyclotella glomerata</i>	9	77			17		4	39									113	150
<i>Cyclotella kutzingiana</i>																		
<i>Cyclotella meneghiniana</i>																		
<i>Cyclotella ocellata</i>		P	P	91	P		P		9	12	7	P		6				
<i>Cymbella affinis</i>													P	6	66			
<i>Cymbella cistula</i>																		
<i>Cymbella cuspidata</i>										P								
<i>Cymbella gracilis</i>																		
<i>Cymbella minuta</i>	P	P	P	P	P			P			P	P	P	P		P		P
<i>Cymbella</i> sp.					P		P											
<i>Denticulatis tenuis</i>							P										P	
<i>Diatoma elongatum</i>	P		P	P	P	P	P	P			P	P		P	5	P	2	P
<i>Diploneis puella</i>			P	P			P											
<i>Diploneis</i> sp.						P												
<i>Epithemia sorex</i>			P					P									P	P
<i>Eunotia exigua</i>																		
<i>Eunotia glacialis</i>													P					
<i>Eunotia praeurupta</i>				P													2	P
<i>Eunotia praeurupta</i> v. <i>inflata</i>			P															
<i>Eunotia</i> sp.							P	P			P							
<i>Fragilaria construens</i>			P	29			P	P			P	P	P					
<i>Fragilaria crotonensis</i>				P				P										
<i>Fragilaria intermedia</i>																		
<i>Fragilaria pinnata</i>		P	P					72			P	P						
<i>Fragilaria</i> sp.																		
<i>Gomphonema angustatum</i>					P		P				P			P		P	P	
<i>Gomphonema constrictum</i>																		
<i>Gomphonema gracile</i>			P								P							
<i>Gomphonema intritutum</i> v. <i>vibrio</i>								P										
<i>Gomphonema olivaceum</i>													P					
<i>Gomphonema parvulum</i>			P															
<i>Gomphonema</i> sp.				P								P	P					
<i>Hantzschia amphioxys</i>			P											P				
<i>Melosira</i> sp.														P				
<i>Meridion circulare</i>																		
<i>Naviculum bacillum</i>			P															
<i>Navicula cryptocephala</i>	P	P	P					P						P				7
<i>Navicula decussis</i>																		
<i>Navicula exigua</i>																		
<i>Navicula lanceolata</i>								P										
<i>Navicula mutica</i>			7															
<i>Navicula pupula</i>								P										P
<i>Navicula radiosa</i>	P	P	P	P			P						P			P		P
<i>Navicula reinhardtii</i>																		
<i>Navicula scandinavica</i>																		
<i>Navicula tripunctata</i>																		
<i>Navicula viridula</i>				P				P										
<i>Navicula</i> sp.			P															
<i>Nitzschia acicularis</i>					P												P	2
<i>Nitzschia amphibia</i>			P					P				P					8	P
<i>Nitzschia angustata</i>																		
<i>Nitzschia dissipata</i>																		
<i>Nitzschia filiformis</i>	P		P	P				7	P		P	P	P	P			P	P
<i>Nitzschia fonticola</i>			P				P											
<i>Nitzschia palea</i>							P											
<i>Nitzschia sigmaidea</i>			P	P														
<i>Nitzschia</i> sp.								P									P	P
<i>Pinnularia stomatophora</i>																		
<i>Pinnularia</i> sp.																		P
<i>Rhizosolenia longiseta</i>	2			7	P		4	13										2
<i>Rhopalodia gibba</i>							P	P										
<i>Stauroneis anceps</i>			P				P	P										P
<i>Stauroneis</i> sp.																		
<i>Stephanodiscus astraea</i>			2	P	P	P	P	33		P	P	P		3	P			20
<i>Stephanodiscus niagarae</i>																		
<i>Surirella angustata</i>			P															
<i>Surirella ovalis</i>							P											
<i>Surirella</i> sp.																		
<i>Synedra acus</i>					P													P
<i>Synedra ulna</i>																		
<i>Synedra</i> sp.	7	4	60	7	2	4	26	67	2	7	41	52	4	7	7	12	2	5
<i>Tabellaria fenestrata</i>	7		P	P			P	22		P	P	P	P	P	P	P	P	P
<i>Tabellaria flocculosa</i>			P	P	P		P	79	P	P	3	P	P	P	3	P	P	P
Total Bacillariophyta	29	343	85	544	36	14	60	388	11	29	51	56	41	53	89	133	192	488

Appendix E6. Phytoplankton density (No. cells/mL) in lakes of the Meliadine Study Area, 1997 and 1998.

Taxa	ML-E				ML-S				ML-W			ML-SF	PL	LML		A6		
	19-Jul-97	17-Aug-97	17-Jul-98	04-Sep-98	20-Jul-97	16-Aug-97	25-Jul-98	01-Sep-98	20-Jul-97	16-Aug-97	27-Jul-98	22-Jul-98	28-Jul-98	29-Jul-98	02-Sep-98	23-Jul-97	17-Aug-97	24-Jul-98
Cryptophyta (Cryptomonads)																		
<i>Cryptomonas curvata</i>			P	P	2	P		P			P	P			7		P	P
<i>Cryptomonas erosa</i>				7				P										
<i>Cryptomonas ovata</i>		7	9	P	2	P	P	7	P		2	7	2	P	3		P	P
<i>Cryptomonas reflexa</i>	7	7	9	7	5	9	15	13	7	1	12	18		19	19	38	9	50
<i>Cyanomonas</i> sp.																		
<i>Katablepharis ovalis</i>	67	P	7	7	46	41	19	53	49	82	3	13			P	53	116	33
<i>Rhodomonas minuta</i>	54	P	33	51	114	108	39	53	89	147	25	47	12	56	806	119	48	214
Total Cryptophyta	128	14	58	72	169	158	73	125	145	230	42	85	15	75	835	210	173	297
Chrysophyta (Chrysophytes)																		
<i>Bitrichia longispina</i>	2	P		4	7	3		7	P	2	3	20	5	P	P			
<i>Botrycoccus protuberans</i>																		
<i>Chromulina</i> sp.	5	P	P	7	20	P	P	P		10				6	7	P	P	7
<i>Chrysidastrum catenatum</i>		P	13	93		51	P	P		10								
<i>Chrysochromulina parva</i>	110	1036	133	1050	274	298	469	1194	294	145	27	67	22	69	299	159	476	20
<i>Chrysococcus</i> sp.	37	20			7				14									P
<i>Chrysoikos skujai</i>	5	7	7	7	10	19	15	13	2	2	20	40	2	6			7	P
<i>Chrysophaerella rodhei</i>	126	266	621	326	414	884	610	1358	295	311	347	781	114	1045	259	2042	1275	604
<i>Chrysostephanosphaera globulifera</i>	P	P				P		7	2	P	P							
<i>Dinobryon crenulatum</i>		7		63		13		33	P	7		7	P	13			5	13
<i>Dinobryon divergens</i>	48	10	7	140	12	3	29	88	7	2	18	73	37	32	65	11	68	444
<i>Dinobryon sertularia</i>		18	7	15	92	16	141	26	105	9	130	58	21	34	10	P	29	7
<i>Dinobryon sertularia v. protuberans</i>	54		61		31	41			24		11	18	10	3				P
<i>Dinobryon sociale</i>	79	97	615	11	126	P	180	148	93		226	107	111	28	3	22	30	32
<i>Dinobryon tabellariae</i>	7		5		3	P	26	P	11	1	21	9	7	7		150		P
<i>Ishtochloron trispinatum</i>	P		P	P														
<i>Kephyron boreale</i>	33	42	246	217	76	19	104	174	49	34	745	867	62	110	266	27	41	179
<i>Kephyrion</i> sp.			P				4				P	P	2	P				P
<i>Mallomonas</i> sp.	1	P		7	3	P		13	7					3	6	2	P	10
<i>Ochromonas</i> sp. a	16	60		7	23	10		59	2	2		7		6	13	13	54	P
<i>Ochromonas</i> sp. b		P		P					P	P						7	P	7
<i>Ochromonas stellaris</i>			P					P						P	7			
<i>Ophiocytium</i> sp.			P								P							
<i>Pseudokephyrion</i> sp.	7		13		3		32	7			10	33	2		P			7
<i>Stelxmonas</i> sp.												13						
<i>Stichogloea doederleinii</i>		7		P	7	6	P	79	23	6	13	13	5	10	24	60	41	40
<i>Synura</i> sp.	P	P	2	P	P	P	P	P				25	P		P			
Unidentified Chrysophyta colony		20																
Unidentified statospore		P	33	P		3	15				20	7	5	P	7	14	2	23
Total Chrysophyta	530	1590	1763	1947	1108	1325	1666	3205	928	541	1591	2146	405	1372	965	2507	2028	1391
Pyrophyta (Dinoflagellates)																		
<i>Glenodinium</i> sp.	19	11	2	7	3	19	7	39	7	10	7	7	P	P	7	23	14	7
<i>Gymnodinium</i> sp.			3	P			P	7		P	4	2	P	P	P	P	P	P
<i>Gymnodinium helveticum</i>	1	P	P	P	P	P	4		P	P	P	2	P					P
<i>Gymnodinium uberrimum</i>	2	2	P	P	P	P	P	P		1	P	P	2	P		P	2	3
<i>Peridinium</i> sp.			2				P		P			P	P					
<i>Peridinium aciculiferum</i>	2	2	5	P	8	13	23	13		4	2	5	P	10	P		11	7
<i>Peridinium cinctum</i>											P	P					P	
Unidentified cyst	P		9		3	2			P	P						4	P	
Total Pyrophyta	24	15	21	7	14	34	34	59	7	15	13	14	5	10	7	27	27	17
Euglenophyta (Euglenoids)																		
<i>Leppocinlis</i> sp.					2													
<i>Trachelomonas</i> sp.				P											P			
Total Euglenophyta					2													
Chlorophyta (Green Algae)																		
<i>Ankistrodesmus convolutus</i>			P		2			26				P		15	251	32	143	
<i>Ankistrodesmus falcatus</i>							3			P				P		3	2	
<i>Ankistrodesmus falcatus v. spiralis</i>					P													37
<i>Ankistrodesmus gelifactus</i>	17	9			14	18			33	5						249	37	
<i>Arthrodesmus triangularis</i>	5	2		4	3	P	P		8	P		P	P					
<i>Binuclearia</i> sp.																		
<i>Botrycoccus</i> sp.				P				5					P	P				
<i>Chlamydomonas</i> sp. a				44				20					2			P	41	
<i>Chlamydomonas</i> sp. b		P	P	15	2	P			5								2	P
<i>Chlamydomonas sagittula</i>					6													
<i>Coelastrum microporum</i>																		
<i>Coelastrum sphaericum</i>																		
<i>Closterium</i> sp.																		
<i>Cosmarium biculatum</i>				P									P					
<i>Cosmarium botrytis</i>															3			
<i>Cosmarium capitulum v. groenlandicum</i>							1	P				P	P					P
<i>Cosmarium depressum</i>												P						
<i>Cosmarium granulatum</i>							P											P
<i>Cosmarium humile v. lacustre</i>																		
<i>Cosmarium impressulum v. suborthogonum</i>																P		
<i>Cosmarium laeve</i>						P												
<i>Cosmarium norinbergense</i>								P				P						
<i>Cosmarium phaseolus v. phaseolus</i>																		
<i>Cosmarium reniforme</i>																		
<i>Cosmarium septentrionale</i>																		
<i>Cosmarium speciosum</i>	P	P			P	P										P	P	
<i>Cosmarium subgranulata</i>																		
<i>Cosmarium turpinii</i>																		
<i>Crucigenia quadrata</i>	P	P		P	26	P			P	15		P	P	P	P	9		P
<i>Crucigenia rectangularis</i>	P	P		P	13	3		P										P
<i>Cylindrocystis</i> sp.																		8
<i>Elakatothrix gelatinosa</i>			P	145		3	7	66			7	P	10	31	7			196
<i>Euastrum dubium v. maius</i>																		P
<i>Euastrum elegans</i>	P			P														P
<i>Gemmellicystis neglecta</i>																		
<i>Gloecocystis schroeteri</i>	44	339		58	97	60	4		54	39		35	P	P		73	41	20
<i>Golenkinia radiata v. brevispina</i>								7						6		P	20	14

Appendix E6. Phytoplankton density (No. cells/mL) in lakes of the Meliadine Study Area, 1997 and 1998.

Taxa	ML-E				ML-S				ML-W			ML-SF	PL	LML		A6		
	19-Jul-97	17-Aug-97	17-Jul-98	04-Sep-98	20-Jul-97	16-Aug-97	25-Jul-98	01-Sep-98	20-Jul-97	16-Aug-97	27-Jul-98	22-Jul-98	28-Jul-98	29-Jul-98	02-Sep-98	23-Jul-97	17-Aug-97	24-Jul-98
<i>Gonatozygon montae</i>				29														
<i>Kirchneriella lunaris</i>							P	20										40
<i>Kirchneriella</i> sp.	2										10					7		P
<i>Koliella longisetta</i>																		
<i>Lagerheimia quadrisetta</i>					3								P					
<i>Micractinium pusillum</i>												7			P			
<i>Monoraphidium</i> sp.																		
<i>Mougeotia</i> sp. a	19	25			4	13		15				20						
<i>Mougeotia</i> sp. b			9	15			P	13										P
<i>Nephrocytium limneticum</i>		2			10	13			2	10								
<i>Oocystis elliptica</i>	23	20			P					1							22	4
<i>Oocystis lacustris</i>	14	40	20	134	13	6	23	269	9	7	3	27	7		31	27	139	68
<i>Oocystis pusilla</i>									9									
<i>Oocystis solitaria</i>																		
<i>Quadrigula closterioides</i>		53		29	5	26			P	5								
<i>Pandorina morum</i>		P																
<i>Pediastrum boryanum</i>			68	P								P						
<i>Pediastrum integrum</i> v. <i>scutum</i>																		55
<i>Pediastrum tetras</i>					P	P	15	59				P			P	20		
<i>Scenedesmus acuminatus</i>																		
<i>Scenedesmus bijuga</i>						6	P											14
<i>Scenedesmus ecomis</i>																	P	P
<i>Scenedesmus incrassatulus</i>		P			P			26			3	P			38	P	39	P
<i>Scenedesmus quadricauda</i>																		
<i>Sphaerocystis Schroeteri</i>			40	225			24	184			10	34	17		56	126		66
<i>Staurastrum anatinum</i> v. <i>biradiatum</i>				P														
<i>Staurastrum apiculatum</i>																		
<i>Staurastrum borgeanum</i>																		
<i>Staurastrum brebissoni</i>				P														
<i>Staurastrum cyrtocentrum</i>																		
<i>Staurastrum dejectum</i>			4		P													
<i>Staurastrum lunatum</i>																		P
<i>Staurastrum paradoxum</i>																		
<i>Staurastrum tetracerum</i>																		
<i>Staurastrum</i> sp.		P		P	P													
<i>Teilingia granulata</i>	2	P	7	7	16	10	P	26	4	14	2	7	P		25		4	41
<i>Tetraedron arthrodesmiforme</i>			P				P					13	P		6	7	7	73
<i>Tetraedron minimum</i>		P	P	P	3	P							P				7	7
<i>Tetraedron muticum</i>																		7
<i>Tetraedron</i> sp.			P			2											4	2
<i>Tetrastrum caudatum</i>																		
<i>Tetrastrum arthrodesmiforme</i>	P	P			7	P			2								33	48
<i>Zygnema</i> sp.																		
Unidentified flagellate				22														
<i>Xanthidium antilopaeum</i>															P			
Total Chlorophyta	126	490	148	725	224	163	112	735	131	96	47	173	39	253	560	637	551	545
Cyanobacteria																		
<i>Agmenellum quadriplicatum</i>							P									159		P
<i>Agmenellum thermale</i>		P																
<i>Anabaena azollae</i>									P									
<i>Anabaena planctonica</i>		P					P				P							
<i>Anabaena</i> sp.	P	14		65	23		P		7		P						70	
<i>Anacystis marina</i>			106	203			P					437			150	8055		73
<i>Anacystis montana</i>																24	33	
<i>Aphanizomenon flos-aquae</i>																		
<i>Aphanocapsa elachista</i>					P	P												306
<i>Aphanocapsa elachista</i> v. <i>planctonica</i>	37		349		20		1748	P	236	34	220				1492		53	414
<i>Aphanothece clathrata</i>	1134	1315		1203	195	177		1175	717	159			1481					3197
<i>Chlorogloea microcystoides</i>																		
<i>Chroococcus turgidus</i>	P	P	P		P					2	P	9	P				31	21
<i>Coelosphaerium kuetzingianum</i>		63			52	P			P	22								
<i>Dactylococcopsis linearis</i>				7														P
<i>Desmonema wrangelii</i>	P																	
<i>Dichotrix gypsophila</i>		P						P					P					
<i>Gomphosphaeria lacustris</i>		P		159	P	P		26			P	P					962	313
<i>Lyngbya contorta</i>																		
<i>Lyngbya limnetica</i>				P								71					43	
<i>Microcoleus vaginatus</i>																		701
<i>Microcystis flos-aquae</i>	P																53	127
<i>Nostoc commune</i>																		
<i>Oscillatoria limnetica</i>			33		20		37	P				53			54			P
<i>Pseudanabaena</i> sp.			30				P											
<i>Schizothrix calcicola</i>																		
<i>Stigonema mammosum</i>																		
Total Cyanobacteria	1171	1392	518	1637	310	177	1792	1201	953	224	1283	517	1481	1642	8292	1175	5149	302
Total Algal Density (No. cells/mL)	2008	3844	2593	4933	1863	1871	3736	5713	2175	1135	3026	2991	1985	3406	10748	4689	8120	3039
Total Number of Taxa Per Sample	56	65	75	78	73	63	67	80	46	52	68	83	59	66	70	64	72	77

Note: P = present but not encountered in routine cell counts.

Appendix E6. Phytoplankton density (No. cells/mL) in lakes of the Meliadine Study Area, 1997 and 1998.

Taxa	A8			B2				B5				B7				D7		G2	
	22-Jul-97	18-Aug-97	23-Jul-98	21-Jul-97	18-Aug-97	21-Jul-98	30-Aug-98	19-Jul-97	18-Aug-97	20-Jul-98	28-Aug-98	18-Jul-97	19-Aug-97	19-Jul-98	22-Aug-98	17-Jul-97	19-Aug-97	24-Jul-97	22-Aug-97
Bacillariophyta (Diatoms)																			
<i>Achnanthes detha</i>		P									P								
<i>Achnanthes exigua</i>		P																	
<i>Achnanthes flexella</i>	P	P	P			P		P		P		P			P				P
<i>Achnanthes lanceolata</i>															P	P	P		
<i>Achnanthes minutissima</i>	2	P	P	P	P	P	6		13	7	P		P	12	P	P	P	P	
<i>Achnanthes minutissima</i> v. <i>cryptocephala</i>	P	P			P	P			P		P			P	P	P	P	P	
<i>Amphipleura pellucida</i>			P											P					
<i>Amphora ovalis</i>			P				P								P				
<i>Amphora ovalis</i> v. <i>pediculus</i>																P			
<i>Anomoeoneis vitrea</i>										P									
<i>Asterionella formosa</i>		P							P										
<i>Cocconeis placentula</i>		P																	
<i>Cocconeis diminuta</i>														P					
<i>Cocconeis</i> sp.															P				
<i>Cyclotella antiqua</i>						P													
<i>Cyclotella bodanica</i>	143	P		3	7			7	46			26	64				4		
<i>Cyclotella comta</i>							13							P	17				
<i>Cyclotella glomerata</i>	163	7			32					P	91				7	7	14	17	
<i>Cyclotella kutzingiana</i>							38				26	40	2		24				
<i>Cyclotella meneghiniana</i>		60	107												P		27	2	
<i>Cyclotella ocellata</i>			169			P	6				162			62					
<i>Cymbella affinis</i>		P				P	6								P	P	P		
<i>Cymbella cistula</i>			P																
<i>Cymbella cuspidata</i>																	P		
<i>Cymbella gracilis</i>											P								
<i>Cymbella minuta</i>	P	P	P	P		P				P	P		P	P	2	P	2	P	
<i>Cymbella</i> sp.			P				P				P								
<i>Denticulatis tenuis</i>	2	2	P				6						P		P				
<i>Diatoma elongatum</i>			P			P	P	P		P	P		P	P	P	P	P		
<i>Diploneis puella</i>						P				P									
<i>Diploneis</i> sp.																		P	
<i>Epithemia sorex</i>						P					P							P	
<i>Eunotia exigua</i>			P																
<i>Eunotia glacialis</i>															P				
<i>Eunotia praeurupta</i>			P																
<i>Eunotia praeurupta</i> v. <i>inflata</i>																			
<i>Eunotia</i> sp.	P									P						2			
<i>Fragilaria construens</i>						P	P			P	P			P					
<i>Fragilaria crotonensis</i>	4	P				P			P	P	P		P	17	P		P	P	
<i>Fragilaria intermedia</i>											6								
<i>Fragilaria pinnata</i>			P			P	P			P	P			P	P	21	18	P	
<i>Fragilaria</i> sp.	P									P									
<i>Gomphonema angustatum</i>		P														P			
<i>Gomphonema constrictum</i>					P														
<i>Gomphonema gracile</i>			P				P												
<i>Gomphonema intricatum</i> v. <i>vibrio</i>																			
<i>Gomphonema olivaceum</i>											P								
<i>Gomphonema parvulum</i>																			
<i>Gomphonema</i> sp.										P									
<i>Hantzschia amphioxys</i>																		P	
<i>Melosira</i> sp.																			
<i>Meridion circulare</i>		P																	
<i>Naviculum bacillum</i>			P														P		
<i>Navicula cryptocephala</i>		P	P			P	P			P	6	2	P	P	12	P	P	P	
<i>Navicula decussis</i>		P																	
<i>Navicula exigua</i>																	P		
<i>Navicula lanceolata</i>						P	P							P					
<i>Navicula mutica</i>										P				P					
<i>Navicula pupula</i>			P													P	P		
<i>Navicula radiosa</i>		P								P	P		P		P		P	P	
<i>Navicula reinhardtii</i>																	P		
<i>Navicula scandinavica</i>																	P		
<i>Navicula tripunctata</i>																	P		
<i>Navicula viridula</i>			P			P					P				P	P	P		
<i>Navicula</i> sp.					P									P	P				
<i>Nitzschia acicularis</i>							P												
<i>Nitzschia amphibia</i>		P					P			P					P				
<i>Nitzschia angustata</i>																			
<i>Nitzschia dissipata</i>																			
<i>Nitzschia filiformis</i>				6		P		P		P	P			P	P				
<i>Nitzschia fonticola</i>						P				P	P			P	P				
<i>Nitzschia palea</i>										P	P						21	4	
<i>Nitzschia sigmaidea</i>		P							P			P							
<i>Nitzschia</i> sp.		P	P							P			P			P			
<i>Pinnularia stomatophora</i>															P				
<i>Pinnularia</i> sp.		P																	
<i>Rhizosolenia longiseta</i>	20		3					P	3	7				3			2		
<i>Rhopalodia gibba</i>																			
<i>Stauroneis anceps</i>								P							P	P	P	P	
<i>Stauroneis</i> sp.		P																	
<i>Stephanodiscus astraea</i>		9	6								6								
<i>Stephanodiscus niagarae</i>																			
<i>Surirella angustata</i>														P					
<i>Surirella ovalis</i>																			
<i>Surirella</i> sp.																			
<i>Synedra acus</i>							P							10					
<i>Synedra ulna</i>			P				P												
<i>Synedra</i> sp.	6	11	42	8	12	8	P	12	21	60	86	6	13		19	19	26	67	
<i>Tabellaria fenestrata</i>			P				P			P	P			P	P		4	P	
<i>Tabellaria flocculosa</i>	P	P		P		P	P	P	P	P	P	P	P	P	P	7	P	2	
Total Bacillariophyta	340	89	334	11	51	8	76	19	83	74	385	74	79	85	126	58	61	133	83

Appendix E6. Phytoplankton density (No. cells/mL) in lakes of the Meliadine Study Area, 1997 and 1998.

Taxa	A8			B2				B5				B7				D7		G2	
	22-Jul-97	18-Aug-97	23-Jul-98	21-Jul-97	18-Aug-97	21-Jul-98	30-Aug-98	19-Jul-97	18-Aug-97	20-Jul-98	28-Aug-98	18-Jul-97	19-Aug-97	19-Jul-98	22-Aug-98	17-Jul-97	19-Aug-97	24-Jul-97	22-Aug-97
Cryptophyta (Cryptomonads)																			
<i>Cryptomonas curvata</i>		5					P	5		P	6	P	P	3	25		2	2	P
<i>Cryptomonas erosa</i>																P			
<i>Cryptomonas ovata</i>	P	7	P		3	P	P	P	5	14	6	P		P	7	2	8	P	2
<i>Cryptomonas reflexa</i>	41	79	13	6	32	14	22	39	10	58	26	43	13	160	20	5	39	22	31
<i>Cyanomonas</i> sp.											P			P					
<i>Katablepharis ovalis</i>	61	46	69	153	109	6	70	163	151	143	88	20	38	149	124	34	118	55	86
<i>Rhodomonas minuta</i>	122	66	88	67	88	171	63	299	66	211	97	167	45	149	62	41	155	96	73
Total Cryptophyta	224	203	169	226	232	192	155	506	232	425	224	230	96	460	238	82	322	175	192
Chrysophyta (Chrysophytes)																			
<i>Bitrichia longispina</i>				4		P	P	3	3	P	P			7	13				
<i>Botryococcus protuberans</i>																	197		
<i>Chromulina</i> sp.		13	6	20	7		P	P	13		6		P		22			21	P
<i>Chrysidastrum catenatum</i>					2		57		33		26		5		25			26	
<i>Chrysochromulina parva</i>	340	325	13	202	789	19	545	1537	262	34	104	612	160	50	360	186	157	613	272
<i>Chrysoococcus</i> sp.		6		104				82	13			214				34		93	7
<i>Chrysoikos skujai</i>	P	P	25	P	41		P		7	68	6			161	12	P	13	2	
<i>Chrysosphaerella rodhei</i>	2160	883	1481	5786	875	2729	2516	5104	2586	2241	908	486	3914	1655	3195	4721	436	1739	760
<i>Chrysostephanosphaera globulifera</i>									P								7	P	27
<i>Dinobryon crenulatum</i>		P	19		34	6	51		39	18	58			2	37	47	P	4	
<i>Dinobryon divergens</i>	P	11	137	16	7	84	766	45	13	218	P	P	8	113	20	86	4	P	80
<i>Dinobryon sertularia</i>	54	86	669	P	54	49	13	41	179	425	84	14	4	626	13	199	46	79	27
<i>Dinobryon sertularia</i> v. <i>protuberans</i>	P		31						2	P		P				14			2
<i>Dinobryon sociale</i>		3	450	17		13	32	757	11	201	126	2	27	168	13	133	11	12	33
<i>Dinobryon tabellariae</i>					P			3	P	22				P		5		2	
<i>Ishimochloron trispinatum</i>								P	P					P	P		2	P	
<i>Kephyrion boreale</i>	388	146	345	7	163	51	254	41	222	585	259	27	50	1571	267	145	243	131	113
<i>Kephyrion</i> sp.			25							7									
<i>Mallomonas</i> sp.	2	P		P	9		13	3	P	P		2	2		P	2		P	
<i>Ochromonas</i> sp. a	54	26			14		95	68	92	P	52		19	P	37	12	13		66
<i>Ochromonas</i> sp. b								P						13					
<i>Ochromonas stellaris</i>							P			P	6								
<i>Ophiocyrtium</i> sp.																			
<i>Pseudokephyrion</i> sp.	P		6			6	P				48	P						5	
<i>Stelxmonas</i> sp.																			
<i>Stichogloea doederleinii</i>	88	P	25	81	14	298	32	14	20	15		P	25	87	124		138	21	7
<i>Synura</i> sp.							P	P		7				P		55	9		2
Unidentified Chrysophyta colony		18																	
Unidentified statospore	14	7	105		P	P	19	109	22	27				180	P	28			
Total Chrysophyta	3100	1524	3336	6237	2009	3254	4392	7807	3517	3916	1638	1357	4216	4666	4187	5620	1321	2718	1396
Pyrophyta (Dinoflagellates)																			
<i>Glenodinium</i> sp.	27	9	P	7	14	6	25	54	7	27	31		6	13	P	14	7	5	33
<i>Gymnodinium</i> sp.			P		P	6	P		28	41	19				P		7	P	
<i>Gymnodinium helveticum</i>								P								P	P		
<i>Gymnodinium uberrimum</i>	P	2	13	P	P		P		2	P			6	P	P		P	2	P
<i>Peridinium</i> sp.				16					4		P								
<i>Peridinium aciculiferum</i>	2	18	P		24	6	6	31	39	P	42	P	8	16	12	30	53	27	28
<i>Peridinium cinctum</i>		P			P					P					P				
Unidentified cyst			P	P									2			P			P
Total Pyrophyta	29	29	13	23	38	19	32	85	80	68	92		22	29	12	44	67	34	61
Euglenophyta (Euglenoids)																			
<i>Leppocinlis</i> sp.																			
<i>Trachelomonas</i> sp.							P				13								
Total Euglenophyta											13								
Chlorophyta (Green Algae)																			
<i>Ankistrodesmus convolutus</i>	92	484	82		7		6	10	P	P	P		6	23				P	
<i>Ankistrodesmus falcatulus</i>	P	2	P	4	P	P	P	7	P	P	P	10	P		13		P	8	2
<i>Ankistrodesmus falcatulus</i> v. <i>spiralis</i>	P	7			P							27	26		P	34	4	12	49
<i>Ankistrodesmus gelifactus</i>	88	63		56	68			43	46			116	30		P	46			2
<i>Arthrodesmus triangularis</i>							P	P											
<i>Binuclearia</i> sp.														P					
<i>Botryococcus</i> sp.																			
<i>Chlamydomonas</i> sp. a	41	27	P		27	P	19		52	7	39	14	13		12	14		14	13
<i>Chlamydomonas</i> sp. b		P				P	6	3	13	20	P		19	P	25	7	2	2	
<i>Chlamydomonas sagittula</i>				7													7		
<i>Coelastrum microporum</i>			100			154					P			P					
<i>Coelastrum sphaericum</i>														P					
<i>Closterium</i> sp.											P				P				
<i>Cosmarium biculatum</i>							P								P				
<i>Cosmarium botrytis</i>						6	P								P				
<i>Cosmarium capitulum</i> v. <i>groenlandicum</i>							P				P				P				
<i>Cosmarium depressum</i>			38																
<i>Cosmarium granulatum</i>				P							P				3				
<i>Cosmarium humile</i> v. <i>lacustre</i>							P				P				12				
<i>Cosmarium impressulum</i> v. <i>suborthogonum</i>						P					P				P				
<i>Cosmarium laeve</i>											P								
<i>Cosmarium norinbergense</i>						P						P	P					P	
<i>Cosmarium phaseolus</i> v. <i>phaseolus</i>											P	P							
<i>Cosmarium reniforme</i>															P				
<i>Cosmarium septentrionale</i>						P													
<i>Cosmarium speciosum</i>	P	2			P		P	36	2			P	P						P
<i>Cosmarium subgranulata</i>											P								
<i>Cosmarium turpinii</i>				1														2	
<i>Crucigenia quadrata</i>			25	P		101	P	75	P	54	26	54	P		P	P	26	19	27
<i>Crucigenia rectangularis</i>			75	29	P	64		13	P		P	P		13	P	P	45	14	
<i>Cylindrocapsa</i> sp.																			
<i>Elakatothrix gelatinosa</i>	P		P			122	114	27			18	26		13	87	26			
<i>Euastrum dubium</i> v. <i>maius</i>	P	P										P				P			
<i>Euastrum elegans</i>		2		P	P	P	P		P					3	P				P
<i>Gemelliscystis neglecta</i>																			P
<i>Gloeocystis schroeteri</i>	34	46		413	224	32		286	105			113	77	33		P		80	46
<i>Golenkinia radiata</i> v. <i>brevispina</i>		P	6	P	2	P	6		P				25	P	20	P		2	44

Appendix E6. Phytoplankton density (No. cells/mL) in lakes of the Meliadine Study Area, 1997 and 1998.

Taxa	A8			B2				B5				B7				D7		G2	
	22-Jul-97	18-Aug-97	23-Jul-98	21-Jul-97	18-Aug-97	21-Jul-98	30-Aug-98	19-Jul-97	18-Aug-97	20-Jul-98	28-Aug-98	18-Jul-97	19-Aug-97	19-Jul-98	22-Aug-98	17-Jul-97	19-Aug-97	24-Jul-97	22-Aug-97
<i>Gonatozygon montae</i>		P																	
<i>Kirchneriella lunaris</i>						38	38			27	7	27	26		37	161			
<i>Kirchneriella</i> sp.	20	20	25	208	P	38	32							20			P	P	
<i>Koliella longisetta</i>																			
<i>Lagerheimia quadrisetta</i>				P	7	32	P			P									
<i>Micractinium pusillum</i>																			
<i>Monoraphidium</i> sp.										P									
<i>Mougeotia</i> sp. a	4							P											
<i>Mougeotia</i> sp. b		P				P													
<i>Nephrocycium limneticum</i>	P	13		P	20									238	83				
<i>Oocystis elliptica</i>	P	38		57	32			41						18	32		P	33	10
<i>Oocystis lacustris</i>	20	126	13	632	415			122	190	367	499	314	117	242	855	258	177	537	93
<i>Oocystis pusilla</i>			19			311	228												
<i>Oocystis solitaria</i>						51	P												
<i>Quadrigula closterioides</i>		P				P	P			20				31	38				P
<i>Pandorina morum</i>	P																		
<i>Pediastrum boryanum</i>							P				P	P							
<i>Pediastrum integrum</i> v. <i>scutum</i>																			P
<i>Pediastrum tetras</i>	P			36	20	87	51	26	54	P	19	P	35	13	87	23	25	28	43
<i>Scenedesmus acuminatus</i>																			
<i>Scenedesmus bijuga</i>	P		P	27	54	P		7	26	41				25	50		28	26	34
<i>Scenedesmus ecomis</i>																			
<i>Scenedesmus incrassatulus</i>	22	13	25	40	8	P	25	P	P	14	19	24	66	13	26	25	44	P	P
<i>Scenedesmus quadricauda</i>				P		P	P	13	20	27	P			P	P	23			14
<i>Sphaerocystis Schroeteri</i>			75			167	203			241	208			186	521				
<i>Staurastrum anatinum</i> v. <i>biradiatum</i>						P													
<i>Staurastrum apiculatum</i>																			2
<i>Staurastrum borgeanum</i>											P								
<i>Staurastrum brebissoni</i>									P										
<i>Staurastrum cyrtocentrum</i>																			
<i>Staurastrum dejectum</i>								P		P									P
<i>Staurastrum lunatum</i>																			
<i>Staurastrum paradoxum</i>																			
<i>Staurastrum tetracerim</i>								P		P									P
<i>Staurastrum</i> sp.				2		5	P	P	2					2				2	P
<i>Teilingia granulata</i>	16	14	25	P	68	32	13	30	15	20	32	7	115	105	50	P	13	9	3
<i>Tetraedron arthrodesmiforme</i>			207			82	6			242	130			211	62				
<i>Tetraedron minimum</i>	P	P	P	2	5	P	6	P	2	P	13	P	P	P	12	P	P	14	7
<i>Tetraedron muticum</i>			P				P		P	P	P			7	27			2	P
<i>Tetraedron</i> sp.	2	5	P	P		13		3	2	P	P	P		P	7				7
<i>Tetrastrum caudatum</i>						P													
<i>Tetrastrum arthrodesmiforme</i>	95	80		27	20			299	26			129	P	0		21	7	41	7
<i>Zygnema</i> sp.							25												
Unidentified flagellate																			
<i>Xanthidium antilopaeum</i>																			
Total Chlorophyta	434	942	716	1540	977	1333	780	1068	582	1079	1064	1115	729	1038	2021	554	639	853	437
Cyanobacteria																			
<i>Agmenellum quadriplicatum</i>				81				P	P					P	198				P
<i>Agmenellum thermale</i>																			
<i>Anabaena azollae</i>																			
<i>Anabaena planctonica</i>														P	40				24
<i>Anabaena</i> sp.				897	184	P	38							47	P	25	27		P
<i>Anacystis marina</i>			658							415				1760					
<i>Anacystis montana</i>						1578	152							322					
<i>Aphanizomenon flos-aquae</i>																			
<i>Aphanocapsa elachista</i>		P										P							P
<i>Aphanocapsa elachista</i> v. <i>planctonica</i>	117			228	88	919	21881	585	39	P		340	29			P	144		
<i>Aphanothece clathrata</i>	1660	3739	P	4933	8149			P	827		16846	2313	6508	9966		106		701	46
<i>Chlorogloea microcystoides</i>								26											53
<i>Chroococcus turgidus</i>	9	P	P	51	P	69	89	16	26	109	71	85	93	30	130			39	
<i>Coelosphaerium kuetzingianum</i>	182	P		431				98	426			P	103			138	7	560	P
<i>Dactylococcopsis linearis</i>																			P
<i>Desmonema wrangellii</i>																			
<i>Dichotrix gypsophila</i>							P				P								
<i>Gomphosphaeria lacustris</i>	P	P	P	768	482	1128	1597	P	188	P	2186	1502	641	769	1364	P	36	315	3390
<i>Lyngbya contorta</i>																			P
<i>Lyngbya limnetica</i>		P						138			P	54							
<i>Microcoleus vaginatus</i>						P				22				P					146
<i>Microcystis flos-aquae</i>																			
<i>Nostoc commune</i>																			
<i>Oscillatoria limnetica</i>				P	P	P	P				P								P
<i>Pseudanabaena</i> sp.	4	P	P			P													P
<i>Schizothrix calcicola</i>																			
<i>Stigonema mammosum</i>																			
Total Cyanobacteria	1972	3739	658	7389	8903	3695	23757	863	1607	660	19103	4294	7409	3193	11790	269	360	3213	3672
Total Algal Density (No. cells/mL)	6099	6526	5225	15426	12210	8501	29192	10348	6101	6221	22518	7070	12551	9472	18373	6627	2770	7126	5841
Total Number of Taxa Per Sample	59	79	78	54	56	83	84	65	71	84	91	53	66	81	96	81	84	74	66

Note: P = present but not encountered in routine cell counts.

Appendix E7. Zooplankton biomass (mg/m³, dry weight) in lakes of the Meliadine Study Area, 1997 and 1998

Taxa	ML-E				ML-S				ML-SE	ML-W			PL	LML		A6		
	19-Jul-97	17-Aug-97	17-Jul-98	04-Sep-98	20-Jul-97	16-Aug-97	25-Jul-98	01-Sep-98	22-Jul-98	20-Jul-97	16-Aug-97	27-Jul-98	28-Jul-98	29-Jul-98	02-Sep-98	23-Jul-97	17-Aug-97	24-Jul-98
Cladocera (Cladocerans)																		
<i>Bosmina longirostris</i>	3.0	3.3	0.6	10.6	2.7	3.7	1.1	4.7	2.4	1.6	3.3	0.1	0.1	1.1	2.8	10.9	10.3	89.3
<i>Chydorus sphaericus</i>			0.02		0.2		0.03											
<i>Daphnia longiremis</i>	6.0	3.4	0.6	1.6	8.5	4.4	1.3	0.3	0.3	4.4	6.2	0.1	10.7	93.4	59.0		0.2	
<i>Eubosmina longispina</i>	5.4	7.6	0.04	0.2	8.5		0.1	0.02	0.8	2.0	6.8	0.1	0.1	0.6	0.9	22.8	23.8	9.0
<i>Holopedium gibberum</i>	311.2	37.0	115.3	5.2	427.1	268.3	56.1		93.4	87.7	223.2	49.8	11.5	26.7	1.1			180.0
Total Cladocera	325.7	51.3	116.6	17.6	447.0	276.4	58.5	5.0	97.0	95.7	239.5	50.1	22.5	121.7	63.8	33.7	34.3	278.3
Calanoida (Calanoid copepods)																		
<i>Diaptomus sicilis</i>										4.4	2.0							
<i>Epischura nevadensis</i>				0.2			0.5		1.3					0.5	2.4			30.2
<i>Epischura</i> spp.	5.6				8.2	2.2				5.9	0.9					4.0		
<i>Heterocope septentrionalis</i>							0.2						0.4	1.4	2.2			5.8
<i>Heterocope</i> spp.	17.9															18.9		
<i>Leptodiaptomus minutus</i> ^a	9.5		0.8	0.2	3.3	3.9	3.4		1.1	4.0	0.8	1.5	4.3	8.2	1.7	128.1	23.3	226.6
Calanoid copepodid	1.7		0.2	0.03	0.5	0.1	0.2			0.8	0.1	1.0	3.3	2.6	0.1	1.4	0.6	4.5
Calanoid nauplii	0.9	0.3	0.5	0.3	0.8	0.6	0.1	1.2	0.1			0.02	0.9	0.3	0.5	3.6	2.6	0.3
Total Calanoida	35.6	0.3	1.5	0.8	12.8	6.8	4.4	1.2	2.4	15.0	3.8	2.5	8.9	13.0	7.0	156.0	26.6	267.4
Cyclopoida (Cyclopoid copepods)																		
<i>Cyclops scutifer</i>	6.6	3.0	1.9	0.8	18.7	3.3	2.6	0.3	2.2	52.2	4.2		10.5	8.9	2.8	17.3	9.0	31.9
<i>Diacyclops bicuspidatus</i>				2.6										3.1				5.1
Cyclopoid copepodid	1.0	0.3	0.1	1.1	0.4	0.2	0.1	0.5	0.1	0.3	0.04		0.3	0.8	1.5	2.8	2.4	5.2
Cyclopoid nauplii	2.2	0.4	0.2	0.1	0.9	1.3	0.04	0.2	0.03	2.7	3.1	0.01	0.02	0.1	0.1	0.8	2.4	0.01
Total Cyclopoida	9.8	3.8	2.2	4.7	20.0	4.7	2.7	1.0	2.3	55.2	7.4	0.0	10.8	9.7	7.5	20.9	13.8	42.2
Rotifera (Rotifers)																		
<i>Asplanchna</i> spp.	1.5		0.4	1.9	5.2	0.2	1.8	4.4	1.9	1.3	0.7	1.2	0.1	0.1		7.6	21.7	0.5
<i>Brachionus</i> spp.																		
<i>Conochilus unicornis</i>	13.9	4.3	0.1	2.1	2.4	11.5	0.8	3.6	4.3	3.1	8.2	0.1	0.8	0.5	1.8	6.8	6.6	2.0
<i>Eosphora</i> spp.																		
<i>Euchlanis dilatata</i>																		
<i>Eudactylocota eudactylocota</i>																		
<i>Filinia longiseta</i>																		
<i>Filinia</i> sp.			0.03				0.01		0.04					0.003				
<i>Gastropus</i> spp.					0.2													
<i>Kellicottia longispina</i>	3.8	1.0	0.7	0.03	3.5	2.9	0.7	0.2	1.3	4.9	2.8	0.8	0.2	0.4	0.3	17.3	9.7	1.1
<i>Keratella cochlearis</i>	13.3	1.7	0.5	1.9	11.5	4.8	1.7	5.5	8.2	6.0	2.2	1.2	0.1	0.3	0.7	18.1	39.0	0.9
<i>Keratella hiemalis</i>			0.005															
<i>Keratella quadrata</i>			0.02				0.02	0.01	0.1					0.01	0.01		0.7	0.1
<i>Lecane luna</i>			0.005															
<i>Lepadella patella</i>														0.002				
<i>Monostyla bulla</i>																		0.01
<i>Monostyla lunaris</i>						0.03		0.003										0.01
<i>Notholca aquinata</i>																		0.01
<i>Notholca squamula</i>																		
<i>Polyarthra delichoptera</i>	0.4	0.7	0.2	0.4	0.1	1.6	1.1	1.9	3.4	1.8	0.4	0.5	0.2	0.1	0.3	1.7	5.1	1.0
<i>Pomopholyx sulcata</i>			0.02	0.3	0.2	0.7	0.4	0.1	0.3	1.3	0.3	0.2	0.01	0.03	0.01	2.8	13.2	
<i>Rotaria</i> spp.																	3.5	
<i>Syncheata pectinata</i>	1.1	1.1	0.2	0.05	0.2	5.1	1.3	1.8	1.7	0.9	0.3	0.3		0.01			3.7	
<i>Trichotria tetracis</i>										0.1								
<i>Trichocerca</i> spp.									0.01			0.01						0.01
Total Rotifera	34.1	8.8	2.1	6.6	23.3	26.9	7.8	17.4	21.2	19.3	14.8	4.4	1.5	1.4	3.2	54.3	103.3	5.6
Total Zooplankton Biomass (mg/m³)	405.2	64.2	122.4	29.6	503.1	314.9	73.5	24.6	122.9	185.3	265.5	57.0	43.8	145.9	81.5	264.9	178.0	593.5
Total Number of Taxa Per Sample	18	13	22	19	19	18	22	16	20	19	18	16	17	22	19	16	18	21

^a Species was identified as *Diaptomus minutus* in 1997 and *Leptodiaptomus minutus* in 1998; however, it is the same species (*Diaptomus minutus* was officially renamed to *Leptodiaptomus minutus*)

Appendix B7. Zooplankton biomass (mg/m³, dry weight) in lakes of the Meliadine Study Area, 1997 and 1998

Taxa	A8			B2				B5				B7				D7		G2	
	22-Jul-97	18-Aug-97	23-Jul-98	21-Jul-97	18-Aug-97	21-Jul-98	30-Aug-98	19-Jul-97	18-Aug-97	20-Jul-98	28-Aug-98	18-Jul-97	19-Aug-97	19-Jul-98	22-Aug-98	17-Jul-97	19-Aug-97	24-Jul-97	22-Aug-97
Cladocera (Cladocerans)																			
<i>Bosmina longirostris</i>	2.8	6.5	17.4	8.7	13.8	52.4	14.5	17.5	3.7	194.4	2.9	23.1	9.8	10.8	13.2	5.8	2.1	3.0	0.3
<i>Chydorus sphaericus</i>									0.1								0.1		
<i>Daphnia longiremis</i>				2.5	4.6	28.9	10.1	1.9	0.3			13.4	5.8	5.1	9.2	0.1	0.5		
<i>Eubosmina longispina</i>	5.6	15.4	0.9	12.7	19.1	5.8	0.3	30.7	4.2	15.3	0.2	21.1	14.4	1.5	2.2	7.9	2.8		
<i>Holopedium gibberum</i>				1129.3		6990.0						1887.0	77.3	2249.7	31.8				
Total Cladocera	8.5	21.9	18.4	1153.2	37.5	7077.0	24.9	50.1	8.3	209.7	3.2	1944.7	107.3	2267.2	56.5	13.8	5.5	3.0	0.3
Calanoida (Calanoid copepods)																			
<i>Diaptomus sicilis</i>				4.3	2.3	8.3													
<i>Epischura nevadensis</i>			12.2			23.7				14.7				1.8	1.3				
<i>Epischura</i> spp.	6.6			15.8				12.6	2.4			7.6							
<i>Heterocope septentrionalis</i>			7.0			20.4				29.3				1.4					
<i>Heterocope</i> spp.	3.1																	2.4	
<i>Leptodiaptomus minutus</i> ^a	42.5	3.8	149.2	8.4	7.6	38.4	1.9	64.3	1.5	425.6		91.0		38.8	0.4				
Calanoid copepodid	0.2		8.7	1.2	0.4	6.2		3.5		2.0		2.8		2.5	0.2			1.5	
Calanoid nauplii	0.4	0.1	0.2	6.4	0.7	2.6	0.8		1.3	0.9	0.4	2.9	1.5	0.9	0.4	2.2	2.9		
Total Calanoida	52.9	3.9	177.3	36.0	11.0	99.7	2.6	80.3	5.3	472.4	0.4	104.3	1.5	45.3	2.3	2.2	2.9	3.9	
Cyclopoida (Cyclopoid copepods)																			
<i>Cyclops scutifer</i>	5.6	5.7	12.9	20.7	74.1	10.7	4.2	63.0	4.2	23.9	0.2	36.1	15.1	9.3	12.9	1.4	1.8	0.9	
<i>Diacyclops bicuspidatus</i>			20.6	2.1		88.0	11.8			49.7	0.4			4.9	16.7				
<i>Cyclopoid copepodid</i>	0.7	2.3	2.9	4.8	3.7	5.7	5.1	11.1	1.4	23.4	0.3	2.6	3.7	1.0	4.1	1.4	0.4	0.1	0.1
<i>Cyclopoid nauplii</i>	0.3	0.02	0.2	2.6	2.0	0.3	0.3	0.3	1.6	0.3	0.2	4.0	0.8	0.1	0.2	2.3	1.7	0.4	
Total Cyclopoida	6.7	8.1	36.6	30.2	79.7	104.8	21.4	74.4	7.2	97.4	1.0	42.7	19.5	15.3	33.8	5.1	3.9	1.5	0.1
Rotifera (Rotifers)																			
<i>Asplanchna</i> spp.	0.8	12.1	0.7	0.4		0.6	0.7	22.8	88.7		4.4	24.2		1.1		58.8	25.3	212.8	6.7
<i>Brachionus</i> spp.											0.0								
<i>Conochilus unicornis</i>	1.0	0.2	5.4	22.9	1.8	3.4	0.8	22.4	3.4	1.0	1.1	22.1	5.7	2.1	2.8	30.7	3.1	8.7	
<i>Eosphora</i> spp.				1.1															
<i>Euchlanis dilatata</i>																		0.3	
<i>Eudactylocota eudactylocota</i>									0.8										
<i>Filinia longiseta</i>																		0.1	
<i>Filinia</i> sp.																			
<i>Gastropus</i> spp.																			
<i>Kellicottia longispina</i>	5.2	0.1	1.6	4.5	7.6	0.5	0.9	7.2	12.6	0.4	2.7	2.1	1.5	0.8	2.0	6.1	5.0	3.6	1.7
<i>Keratella cochlearis</i>	0.6	0.5	2.1	10.1	1.7	0.8	1.1	29.7	20.6	2.9	1.7	18.1	11.3	0.6	1.3	89.1	30.8	117.9	33.7
<i>Keratella hiemalis</i>																			
<i>Keratella quadrata</i>	0.1			1.0	0.2	0.1	0.01	0.4		0.2	0.01			0.2	0.1				
<i>Lecane luna</i>							0.01			0.01					0.01				
<i>Lepadella patella</i>																			
<i>Monostyla bulla</i>											0.01								
<i>Monostyla lunaris</i>		0.005				0.0	0.01				0.01		0.1		0.02				
<i>Notholca aquiminata</i>			0.1	0.2		0.0									0.02	0.2			
<i>Notholca squamula</i>															0.01				
<i>Polyarthra delichoptera</i>	0.4	0.1	1.0	1.0	0.7	0.5		1.6	4.8	2.1	1.8	0.4	1.6	0.6	3.3		9.6	45.8	6.7
<i>Pomopholyx sulcata</i>	0.7	0.1	0.05							0.01	0.1	0.6	4.2		0.4				
<i>Rotaria</i> spp.																	1.5		
<i>Syncheata pectinata</i>		0.02					0.1	0.3	10.0	0.3	1.2				0.2	1.0		6.8	3.6
<i>Trichotria tetracis</i>																			
<i>Trichocerca</i> spp.							0.3												
Total Rotifera	8.8	13.1	11.0	41.2	12.1	5.9	5.2	84.3	140.8	6.8	13.0	67.5	24.3	5.3	10.1	185.8	75.6	395.7	52.4
Total Zooplankton Biomass (mg/m³)	76.8	47.0	243.2	1260.7	140.3	7287.4	54.2	289.1	161.5	786.3	17.5	2159.2	152.6	2333.2	102.7	206.9	87.9	404.0	52.7
Total Number of Taxa Per Sample	17	15	18	21	15	22	19	16	16	19	18	17	14	19	23	13	15	12	7

^a Species was identified as *Diaptomus minutus* in 1997 and *Leptodiaptomus minutus* in 1998; however, it is the same species (*Diaptomus minutus* was officially renamed to *Leptodiaptomus minutus*)

Appendix E8. Zooplankton density (No. organisms/m³) in lakes of the Meliadine Study Area, 1997 and 1998

Taxa	ML-E				ML-S				ML-SE	ML-W			PL	LML		A6		
	19-Jul-97	17-Aug-97	17-Jul-98	04-Sep-98	20-Jul-97	16-Aug-97	25-Jul-98	01-Sep-98	22-Jul-98	20-Jul-97	16-Aug-97	27-Jul-98	28-Jul-98	29-Jul-98	02-Sep-98	23-Jul-97	17-Aug-97	24-Jul-98
Cladocera (Cladocerans)																		
<i>Bosmina longirostris</i>	1479	1612	150	2462	1307	1810	246	1087	558	766	1601	23	32	254	655	5350	5055	20667
<i>Chydorus sphaericus</i>			12		107		15											
<i>Daphnia longiremis</i>	2396	1329	69	186	3387	1749	146	29	38	1738	2464	8	1234	2324	1467		82	
<i>Eubosmina longispina</i>	1430	2037	23	96	2267		62	10	462	538	1811	31	64	334	513	6082	6360	5333
<i>Holopedium gibberum</i>	661	79	142	6	907	570	69		115	186	474	62	433	1002	43			222
Total Cladocera	5966	5056	396	2750	7973	4129	538	1125	1173	3229	6350	123	1763	3913	2678	11432	11497	26222
Calanoida (Calanoid copepods)																		
<i>Diaptomus sicilis</i>										352	158							
<i>Epischura nevadensis</i>				6			15		38					13	71			889
<i>Epischura</i> spp.	256				373	102				269	42					183		
<i>Heterocope septentrionalis</i>							8						16	53	85			222
<i>Heterocope</i> spp.	217															229		
<i>Leptodiaptomus minutus</i> ^a	838		85	19	293	346	369		115	352	74	162	465	895	185	11340	2066	24667
Calanoid copepodid	444		42	6	133	20	31			207	21	192	641	507	28	366	163	889
Calanoid nauplii	2767	1103	1763	1105	2494	1903	348	3849	203			72	2940	1030	1688	11404	8473	982
Total Calanoida	4522	1103	1890	1137	3294	2370	771	3849	357	1180	295	426	4061	2499	2058	23522	10702	27649
Cyclopoida (Cyclopoid copepods)																		
<i>Cyclops scutifer</i>	819	377	181	77	2320	407	254	29	212	6478	527		1026	868	271	2149	1114	3111
<i>Diacyclops bicuspidatus</i>				231											271			444
<i>Cyclopoid copepodid</i>	513	157	15	231	213	102	15	115	19	145	21		64	160	313	1418	1223	1111
<i>Cyclopoid nauplii</i>	31359	5883	3535	2140	12470	17756	608	2380	390	38217	44011	144	302	905	1870	11404	33892	126
Total Cyclopoida	32690	6418	3731	2679	15003	18265	877	2524	621	44840	44559	144	1392	1933	2724	14971	36230	4793
Rotifera (Rotifers)																		
<i>Asplanchna</i> spp.	4612		740	3462	15795	634	3301	7932	3513	4023	2047	2153	235	197		869	2473	881
<i>Brachionus</i> spp.																		
<i>Conochilus unicornis</i>	157718	48904	1110	19388	27434	130635	7297	33929	40589	35200	93140	1148	7655	4603	16895	76977	74140	18885
<i>Eosphora</i> spp.																		
<i>Euchlanis dilata</i>																		
<i>Eudactylocota eudactylocota</i>																		
<i>Filinia longiseta</i>																		
<i>Filinia</i> sp.			463				87		585					39				
<i>Gastropus</i> spp.					2494													
<i>Kellicottia longispina</i>	75631	19488	13094	692	69000	58342	14333	4230	26734	96548	55270	16218	4096	7200	5539	342121	192763	21403
<i>Keratella cochlearis</i>	161407	20591	6061	22662	139662	58342	21109	66713	99327	72411	26611	15070	1410	3462	8794	219528	474493	10701
<i>Keratella hiemalis</i>			93															
<i>Keratella quadrata</i>			185				174	88	781					79	69		8473	881
<i>Lecane luna</i>			93															
<i>Lepadella patella</i>														39				
<i>Monostyla bulla</i>																		126
<i>Monostyla lunaris</i>						634		88										126
<i>Notholca aquiminata</i>																		
<i>Notholca squamula</i>																		
<i>Polyarthra delichoptera</i>	8301	13237	2869	6106	2494	31708	17113	29347	52688	36206	7165	8037	3727	2321	5332	34212	101677	15485
<i>Pomopholyx sulcata</i>			416	6798	3325	9512	10077	1851	7415	18103	4094	6602	302	787	138	39914	186408	
<i>Rotaria</i> spp.																	10591	
<i>Syncheata pectinata</i>	9223	9193	1064	315	1663	41220	8166	11192	10733	7040	2047	1866		39			29656	
<i>Trichotria tetracis</i>										1006								
<i>Trichocerca</i> spp.									195			215						126
Total Rotifera	416891	111413	26187	59424	261867	331027	81657	155370	242560	270537	190373	51310	17424	18767	36768	713622	1080675	68614
Total Zooplankton Density (org./m³)	460071	123990	32204	65989	288137	355791	83843	162868	244711	319785	241577	52002	24640	27111	44229	763545	1139104	127278
Total Number of Taxa Per Sample	18	13	22	19	20	18	22	16	20	19	18	16	17	22	19	16	18	21

^a Species was identified as *Diaptomus minutus* in 1997 and *Leptodiaptomus minutus* in 1998; however, it is the same species (*Diaptomus minutus* was officially renamed to *Leptodiaptomus minutus*)

Appendix E8. Zooplankton density (No. organisms/m³) in lakes of the Meliadine Study Area, 1997 and 1998

Taxa	A8			B2				B5				B7				D7		G2	
	22-Jul-97	18-Aug-97	23-Jul-98	21-Jul-97	18-Aug-97	21-Jul-98	30-Aug-98	19-Jul-97	18-Aug-97	20-Jul-98	28-Aug-98	18-Jul-97	19-Aug-97	19-Jul-98	22-Aug-98	17-Jul-97	19-Aug-97	24-Jul-97	22-Aug-97
Cladocera (Cladocerans)																			
<i>Bosmina longirostris</i>	1393	3198	4038	4250	6767	12118	3350	8582	1821	45000	677	11329	4779	2511	3067	2821	1025	1469	128
<i>Chydorus sphaericus</i>									27								50		
<i>Daphnia longiremis</i>				1003	1822	3313	1162	740	136			5298	2318	588	1062	43	200		
<i>Eubosmina longispina</i>	1506	4108	538	3400	5094	3400	205	8212	1114	9000	138	5643	3836	908	1297	2115	750		
<i>Holopedium gibberum</i>				2397		8631						4006	164	2778	39				
Total Cladocera	2899	7306	4577	11050	13682	27462	4718	17534	3098	54000	815	26277	11097	6784	5465	4979	2025	1469	128
Calanoida (Calanoid copepods)																			
<i>Diaptomus sicilis</i>				349	186	436													
<i>Epischura nevadensis</i>			359			697				667				53	39				
<i>Epischura</i> spp.	301			719				572	109			345							
<i>Heterocope septentrionalis</i>			269			785				1333				53					
<i>Heterocope</i> spp.	38																	29	
<i>Leptodiaptomus minutus</i> ^a	3765	339	16244	741	669	4185	205	5688	136	46333		8055		4220	39				
Calanoid copepodid	56		1705	305	112	1221		909		392		732		481	39			382	
Calanoid nauplii	1174	254	570	20383	2318	8263	2469		4237	2908	1178	9400	4796	2823	1305	7014	9352		
Total Calanoida	5334	593	19147	22498	3285	15586	2674	7168	4481	51633	1178	18533	4796	7631	1423	7014	9352	411	
Cyclopoida (Cyclopoid copepods)																			
<i>Cyclops scutifer</i>	696	593	1256	2572	9183	1046	410	7808	516	2333	15	4480	1867	908	1258	171	225	118	
<i>Diacyclops bicuspidatus</i>			1795	218		7672	1026			4333	31			427	1455				
<i>Cyclopoid copepodid</i>	358	1186	628	2419	1896	1221	1094	5654	707	5000	62	1335	1867	214	865	727	200	59	51
<i>Cyclopoid nauplii</i>	4695	254	1278	36690	27817	4880	4321	4197	23301	4539	2397	56402	11191	1255	2498	31974	23381	5495	
Total Cyclopoida	5749	2033	4957	41899	38897	14818	6851	17658	24524	16206	2505	62217	14924	2804	6076	32871	23806	5671	51
Rotifera (Rotifers)																			
<i>Asplanchna</i> spp.	94	1376	1278	1359		1148	1329	2591	10084		7896	2757		2027		6688	2875	24208	133012
<i>Brachionus</i> spp.											282								
<i>Conochilus unicornis</i>	11736	1737	50384	259549	20863	31862	7478	253893	38129	9276	10434	249781	63948	19594	26071	347717	35071	98913	
<i>Eosphora</i> spp.				13589															
<i>Euchlanis dillata</i>																		2338	
<i>Eudactylocota eudactylocota</i>									4237									2338	
<i>Filinia longiseta</i>																			
<i>Filinia</i> sp.																			
<i>Gastropus</i> spp.																			
<i>Kellicottia longispina</i>	103280	2372	32677	89687	150677	10621	18114	142684	249956	7697	53159	41630	28777	15250	40433	119902	98200	71437	33253
<i>Keratella cochlearis</i>	7042	6395	26105	122300	20863	9616	13129	360906	249956	35131	20164	220237	137488	6853	15299	1083118	374095	1434243	409427
<i>Keratella hiemalis</i>																			
<i>Keratella quadrata</i>	1174			10871	2318	574	166	4197		1974	141			2703	781				
<i>Lecane luna</i>							166			197					156				
<i>Lepadella patella</i>																			
<i>Monostyla bulla</i>											141								
<i>Monostyla lunaris</i>		85				287	166				423		1599		468	3997			
<i>Notholca aquiminata</i>			365	1359		144									156				
<i>Notholca squamula</i>															312				
<i>Polyarthra delichoptera</i>	7042	2880	15517	20383	13909	7463		31474	95322	32565	27919	8057	31974	8783	51361		189386	906705	133012
<i>Pomopholyx sulcata</i>	9389	1101	1278				19776			197	2961	8057	59152		9991				
<i>Rotaria</i> spp.																		4676	
<i>Syncheata pectinata</i>		169					2327	2098	80494	1776	7614				1405	7994		54952	29096
<i>Trichotria tetracis</i>																			
<i>Trichocerca</i> spp.							1994												
Total Rotifera	139756	16115	127603	519097	208630	61715	64646	797844	728178	88813	131135	530519	322937	55210	146434	1569415	708980	2590459	737799
Total Zooplankton Density (org./m³)	153737	26047	156284	594544	264494	119581	78889	840204	760282	210653	135633	637546	353755	72429	159397	1614279	744163	2598011	737978
Total Number of Taxa Per Sample	17	15	18	21	15	22	19	16	17	19	18	17	14	19	23	13	16	12	7

^a Species was identified as *Diaptomus minutus* in 1997 and *Leptodiaptomus minutus* in 1998; however, it is the same species (*Diaptomus minutus* was officially renamed to *Leptodiaptomus minutus*)

Appendix E9. Summary of habitat data at benthic macroinvertebrate sampling sites in streams of the Meliadine Study Area, 1997 and 1998

Stream	UTM Coordinates (NAD 83, Zone 15V)		Samples Collected in July 1997					Samples Collected in July 1998				
	Easting	Northing	Date	Replicate Number	Depth (cm)	Velocity (cm/s)	Substrate ^a (%)	Date	Replicate Number	Depth (cm)	Velocity (cm/s)	Substrate (%)
A0-1	544368	6985802	21-Jul-97	1 2 3 4 5	7 5 6 6 6	13 26 6 8 12	Bo=5 Co=30 Pb=40 Gr=20 Si/Sa=5	17-Jul-98	1 2 3 4 5	16 21 20 23 18	23 26 32 27 28	Bo=5 Co=30 Pb=40 Gr=20 Si/Sa=5
A5-6	542426	6985968	23-Jul-97	1 2 3 4 5	7 9 9 5 9	8 3 3 11 6	Bo=30 Co=40 Pb=10 Gr=10 Si/Sa=10	24-Jul-98	1 2 3 4 5	17 19 19 15 19	28 33 33 31 36	Bo=30 Co=40 Pb=10 Gr=10 Si/Sa=10
A7-8	541768	6986477	22-Jul-97	1 2 3 4 5	10 10 7 5 6	11 2 1 4 12	Bo=50 Co=20 Pb=10 Gr=10 Si/Sa=10	23-Jul-98	1 2 3 4 5	10 10 12 13 10	18 22 21 14 12	Bo=30 Co=30 Pb=20 Gr=10 Si/Sa=10
B1-2	537425	6985795	21-Jul-97	1 2 3 4 5	13 13 12 12 13	42 63 40 43 47	Bo=0 Co=40 Pb=40 Gr=15 Si/Sa=5	21-Jul-98	1 2 3 4 5	12 14 15 12 13	35 22 32 35 37	Bo=0 Co=40 Pb=40 Gr=15 Si/Sa=5
B3-4	538070	6986890	not sampled in 1997					21-Jul-98	1 2 3 4 5	12 11 16 17 16	42 50 43 43 47	Bo=0 Co=30 Pb=40 Gr=15 Si/Sa=15
B4-5	538416	6987531	24-Jul-97	1 2 3 4 5	21 17 16 14 22	5 5 6 8 4	Bo=10 Co=40 Pb=30 Gr=10 Si/Sa=10	20-Jul-98	1 2 3 4 5	22 17 14 14 23	12 15 15 18 14	Bo=10 Co=40 Pb=30 Gr=10 Si/Sa=10
B5-6	537870	6988655	not sampled in 1997					19-Jul-98	1 2 3 4 5	26 25 26 26 21	23 22 21 24 25	Bo=10 Co=30 Pb=30 Gr=20 Si/Sa=10
B6-7	537809	6989294	17-Jul-97	1 2 3 4 5	5.5 8 16 11 8	21 18 3 12 34	Bo=50 Co=30 Pb=10 Gr=10 Si/Sa=<1	19-Jul-98	1 2 3 4 5	15 18 16 14 16	32 33 37 28 29	Bo=40 Co=30 Pb=20 Gr=10 Si/Sa=<1
D0-1	532769	6989482	24-Jul-97	1 2 3 4 5	6 5 12 13 11	23 41 17 21 18	Bo=40 Co=30 Pb=20 Gr=5 Si/Sa=5	not sampled in 1998				
D6-7	536036	6988812	17-Jul-97	1 2 3 4 5	10 7 7 5 4	12 13 21 65 28	Bo=20 Co=40 Pb=20 Gr=10 Si/Sa=10	not sampled in 1998				
ML-MR	530582	6989248	23-Jul-97	1 2 3 4 5	12 16 10 12 10	34 42 43 32 26	Bo=30 Co=30 Pb=25 Gr=10 Si/Sa=5	25-Jul-98	1 2 3 4 5	22 26 20 22 20	43 44 43 45 46	Bo=30 Co=30 Pb=25 Gr=10 Si/Sa=5
ML-PL	523751	7000635	22-Jul-97	1 2 3 4 5	16 16 18 20 13	44 59 41 37 51	Bo=45 Co=10 Pb=30 Gr=10 Si/Sa=5	27-Jul-98	1 2 3 4 5	18 19 18 20 23	45 54 44 37 48	Bo=45 Co=10 Pb=30 Gr=10 Si/Sa=5
MR-L	544650	6971720	not sampled in 1997					20-Jul-98	1 2 3 4 5	25 24 26 24 10	45 34 33 29 40	Bo=40 Co=30 Pb=20 Gr=5 Si/Sa=5

^a Bo = boulder (>256 mm), Co = cobble (64-256 mm), Pb = pebble (16-64 mm), Gr = gravel (4-16 mm), and Si/Sa = silt/sand (<2 mm). Substrate data are averages for all five replicates.

Appendix E10. Benthic macroinvertebrate densities (individuals/m²) in streams of the Meliadine Study Area, 1997 and 1998

Taxa	A0-1						A0-1						A5-6						A7-8									
	July 1997						July 1998						July 1997						July 1998									
	Rep 1	Rep 2	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 4	Mean	SE	Rep 1	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 4	Rep 5	Mean	SE	
Brvozoa																												
Coelenterata																												
<i>Hydra</i>	989	1806	4043	5194	3008	973	226	118	208	184	33									215	430	215	124	86	183	67	44	
Turbellaria	86				22	22	333	108	512	318	117						355	785	108	416	198							
Nematoda	452	828	1903	1290	1118	313	3269	559	2034	1954	783	1290	1269	4043	2201	921	1602	2548	5527	3226	1183	4000	774	226	538	1384	879	
Oligochaeta																												
<i>Enchytraeidae</i>	204	1032		860	524	250		65	82	49	25	495	194	2473	1054	715	323	366	495	394	52	581	11	43	161	199	131	
<i>Lumbriculidae</i>			97		24	24	22	11		11	6	86	22		36	26	473	688	118	427	166				11	3	3	
<i>Naididae</i>	4624	3548	2312	409	2723	905	516	366	938	607	171	2022	3763	2581	2789	513	1753	1344	849	1315	261	2452	1172	2355	817	1699	414	
<i>Tubificidae</i>	43			22	16	10	215	172	11	133	62				36	36	3871	1290	860	2007	940	108	344			113	81	
Hirudinea																												
<i>Piscicola</i>																												
Gastropoda																												
<i>Ancylidae</i>			140		35	35														11	4	4				151	38	38
<i>Ferrissia</i>																												
<i>Hydrobiidae</i>																									11	3	3	
<i>Lymnaeidae</i>																												
<i>Physidae</i>																						280	22			75	68	
<i>Physa</i>	86	247		22	89	56	11	43	22	25	9	22		22	14	7		11	11	7	4		11	43		13	10	
<i>Physella</i>																									11	3	3	
<i>Valvata</i>																												
<i>Valvata sincera h.</i>	11	32	839	398	320	194	312	151	265	243	48														11	3	3	
Tardigrada												108	86	65	33													
Hydracarina	5978	4731	2290	935	3484	1144	1301	1903	1236	1480	212	602	1226	753	860	188	1086	1516	2366	1656	376	860	613	699	1430	901	184	
Arachnida																												
<i>Dolomedes</i>																												
Conchostraca	86	86		86	65	22						1032	688	2237	1319	469									1892	301	548	454
Cladocera																												
<i>Bosminidae</i>																												
<i>Bosmina</i>				86	22	22		215	154	123	64	86	86	57	29	215	871		362	262								
<i>Chydoridae</i>		516	720	602	460	159	753	108	573	478	192	20258	6172	7484	11305	4493	645	656	6892	2731	2081	7097	452	43	97	1922	1727	
<i>Daphnia</i>																												
<i>Holopedidae</i>																												
<i>Holopedium</i>							11			4	4																	
<i>Sididae</i>																												
<i>Diaphanosoma</i>																												
Copepoda																												
<i>Calanoida</i>																												
<i>Cyclopoida</i>	269	172	720	226	347	126	430	882	952	755	164	452	538	366	452	50	1505	3258	860	1875	716	172	3118	957	1000	677	1438	565
<i>Harpacticoida</i>	86		75	344	126	75	817	538	308	554	147	882	194	1032	703	256	1301	1796	1731	1609	155	430	258	215	172	269	57	
Ostracoda																												
<i>SpeciesA</i>	763	946	355	2355	1105	435	1946	4785	727	2486	1202	1806	1140	2237	1728	319	6247	1774	3892	3971	1292	1290	6290	2753	269	2651	1316	
<i>SpeciesB</i>	86	774	140	172	293	161								172	57	57						1032	86	215		333	237	
<i>SpeciesC</i>																												
Amphipoda																												
<i>Gammarus</i>																												
Collembola			11		3	3	108		72	60	32						645	215		287	190				43	11	11	
Ephemeroptera																												
<i>Baetidae</i>																												
<i>Baetis (a)</i>	43	43		22	12																							
<i>Baetis</i>	312	75		97	74		97	430	118	215	108						65	194	11	90	54							
<i>Centroptilum</i>																												
<i>Ephemerellidae</i>																												
<i>Ephemerella</i>																												
<i>Leptophlebiidae</i>																												
Plecoptera			75		19	19																				43	11	11
<i>Perlodidae</i>																												
<i>Cultus</i>																												
<i>Isoperla</i>																												
<i>Skwala</i>																												
<i>Nemouridae</i>																												
<i>Nemoura</i>	65	54	54	54	56	3	11	11	22	14	4														11	3	3	
<i>Soyedina</i>																												
Hemiptera																												
<i>Corixidae</i>		11			3	3																			43	11	11	
Trichoptera																												
<i>Brachycentridae</i>																												
<i>Brachycentrus</i>																												
<i>Hydropsychidae</i>																												
<i>Potamyia</i>																												
Trichoptera																												
<i>Limnephilidae</i>																												
<i>Grensia</i>	32		11		11	8	22	11		11	6	108	65	86	86	12	11	43		18	13	366	301	129	32	207	77	
<i>Limnephilus</i>																												
Coleoptera																												
<i>Curculionidae</i>																										</		

Appendix E10. Benthic macroinvertebrate densities (individuals/m²) in streams of the Meliadine Study Area, 1997 and 1998

Taxa	A7-8						B1-2						B3-4											
	July 1998						July 1997						July 1998											
	Rep 1	Rep 2	Rep 4	Rep 5	Mean	SE	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 3	Rep 4	Rep 5	Mean	SE	
Bryozoa																								
Coelenterata																								
<i>Hydra</i>	11				3	3	6151	23269	8409	23559	15347	4681	10548	3817	4333	6233	2163	1344	247	2118	430	530	293	
Turbellaria	215	143	645		251	139							1559	2742	785	1695	569	860	22	1376	935	798	283	
Nematoda	3065	2378	4129	398	2492	786	1075	140	871	570	664	203	677	925	710	771	78	226	527	2914	677	1086	617	
Oligochaeta																								
Enchytraeidae	226	440	2140	32	710	484	301		258	344	226	77							22	452	11	121	110	
Lumbriculidae	65	233	118	43	115	42		32			8	8	97	11	22	43	27	86	22	108	32	62	21	
Naididae	978	154	667	258	514	190	2022	968	527	957	1118	318	3710	258	1140	1703	1035	2086	3882	6054	8914	5234	1471	
Tubificidae		236		108	86	56	43		11	75	32	17						462	527	817	484	573	83	
Hirudinea																								
<i>Piscicola</i>																								
Gastropoda																								
Ancyliidae								65			16	16												
<i>Ferrissia</i>																								
Hydrobiidae				11	3	3																		
Lymnaeidae														11		4	4							
Physidae																								
<i>Physa</i>									54	108	40	26	86	11		32	27	22	22	11	237	73	55	
<i>Physella</i>																								
Valvatiidae																								
<i>Valvata sincera</i> h.																		11		194	473	169	111	
Tardigrada										43	11	11												
Hydracarina	430	963	3032	1720	1537	564	3441	2011	2129	2957	2634	341	3742	4312	2204	3419	629	1570	2688	1409	2688	2089	348	
Arachnida																								
<i>Dolomedes</i>																								
Conchostraca								172		258	516	237	108											
Cladocera																								
Bosminidae																								
<i>Bosmina</i>								430			108	108	6022	4376	7527	5975	910	2796	2796	989	860	1860	541	
Chydoridae	860	143	430	215	412	161							3011	441	645	1366	825	430		323	860	403	178	
Daphnia								215	86	43	86	46	1505	1215	2581	1767	415		215			54	54	
Holopedidae								86	753	344	301	371	139	4946	6022	7312	6093	684	699	2247	935	1570	1363	347
<i>Holopedium</i>																								
Sidiidae																								
<i>Diaphanosoma</i>																								
Copepoda																								
Calanoida					27	27		11		43	13	10	3011	1645	3032	2563	459	645	699	183	645	543	121	
Cyclopoida	226	154	645	226	313	112	215	355	344	430	336	45	2366	5290	4333	3996	861	14043	11645	8108	8645	10610	1384	
Harpacticoida	430	32	441	22	231	118	86		258	86	108	54	1290	430	226	649	326	430		785	430	411	161	
Ostracoda																								
SpeciesA	1301	2159	4172	3129	2690	619	430	118	946	1333	707	270	3871	1129	1290	2097	888	215	215	1742	871	761	362	
SpeciesB							430		688	602	430	153												
SpeciesC								22			5	5												
Amphipoda																								
<i>Gammarus</i>																		75		129	54	65	27	
Collembola		72		108	45	27																3	3	
Ephemeroptera																								
Baetidae																								
<i>Baetis</i> (a)																								
<i>Baetis</i>	312	108	151	258	207	47	559	301	699	785	586	106	484	699	462	548	76	978	2237	1387	2634	1809	380	
Centropilum																								
Ephemerellidae										11														
<i>Ephemerella</i>																								
Leptophlebiidae																								
Plecoptera																								
Perlodidae							43		86	129	65	28	65	108	65	79	14							
<i>Cultus</i>									43		11	11												
<i>Isoperla</i>										32	8	8												
<i>Stenonema</i>							43	65	43	65	54	6												
Nemouridae													11	226	11	82	72	32	22	129	43	56	25	
<i>Nemoura</i>									11	183	48	45												
<i>Soyedina</i>																								
Hemiptera																								
Corixidae																								
Trichoptera																								
Brachycentridae																								
<i>Brachycentrus</i>																								
Hydropsychidae																								
<i>Potamya</i>																								
Trichoptera																								
Limnephilidae	32	125	11	54	56	25		11			3	3									11	22	8	
<i>Grensia</i>								11	11	11	11	11												
<i>Limnephilus</i>																								
Coleoptera																								
Curculionidae																								
Dytiscidae(a)																								
Dytiscidae	11	22	11	54	22	12				11	3	3												
<i>Hydroporus</i>																								
<i>Coptotomus</i> (a)																								
<i>Oreodytes</i> (a)																								
<i>Oreodytes</i> (l)																								
<i>Hygrobia</i>																								
Halplidae			11		3	3																		
<i>Brychius</i> (a)																								
<i>Brychius</i>																								
<i>Halplus</i> (a)																								
<i>Halplus</i> (l)																								

Appendix E10. Benthic macroinvertebrate densities (individuals/m²) in streams of the Meliadine Study Area, 1997 and 1998

Taxa	B4-5										B5-6					B6-7									
	July 1997					July 1998					July 1998					July 1997									
	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 2	Rep 3	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 5	Mean	SE		
Brzoza																									
<i>Coelenterata</i>																									
<i>Hydra</i>	6538	6172	3806	4688	935	4428	1004	3269	1946	1516	2244	527	774	710	1290	925	184	3129	10946	4946	8516	6884	1756		
Turbellaria								645	1075	323	681	218	215	161	785	387	200								
Nematoda	1935	774	1118	785	269	976	276	946	892	398	746	175	5129	1032	1333	2498	1318	1731	1581	1796	8430	3384	1683		
Oligochaeta			269	430		140	89													2817		704	704		
<i>Enchytraeidae</i>	774	914			129	363	199	11	43		18	13	742	43	194	326	212	538	1312		2452	1075	532		
<i>Lumbriculidae</i>			151	527		135	102	75	118	151	115	22			11	4	4				43		11	11	
<i>Naididae</i>	1419	624	570	763	54	686	219	5280	4989	3527	4599	542	742	935	16505	6061	5223	7667	2559	387	14903	6379	3225		
<i>Tubificidae</i>	387	419	43	54	280	237	80	11	247	581	280	165	1312	226	452	663	331	22	151		108	70	36		
Hirudinea																									
<i>Piscicola</i>																									
Gastropoda																					151		38	38	
<i>Ancylidae</i>																									
<i>Ferrissia</i>																									
<i>Hydrobiidae</i>																					11		3	3	
<i>Lymnaeidae</i>																									
<i>Physidae</i>																									
<i>Physa</i>																									
<i>Physella</i>																									
<i>Valvatidae</i>																									
<i>Valvata sincera</i> h.	43					9	9	11			4	4	280	344	796	473	162	269	280	516	129	298	80		
Tardigrada	86		32			24	17						108			36	36								
Hydracarina	989	226	301	570	86	434	160	430	11	226	222	121	2097	1000	1161	1419	342	3430	2968	452	7591	3610	1480		
Arachnida																									
<i>Dolomedes</i>																									
Conchostraca	35613	13161			978	9951	6883											172	1634		1118	731	389		
Cladocera																									
<i>Bosminidae</i>																									
<i>Bosmina</i>	731	258	118	108	11	245	128	215	3011	753	1326	856	1301	688	1290	1093	203	24613	24344	9065	44000	25505	7156		
<i>Chydoridae</i>	1892	1462	15312	8280	86	5406	2851	4946	8172	4516	5878	1154	1398	645	215	753	346			5591		1398	1398		
<i>Daphnia</i>																									
<i>Holopedidae</i>																									
<i>Holopedium</i>																									
<i>Sididae</i>																									
<i>Diaphanosoma</i>																									
Copepoda																									
<i>Calanoida</i>																									
<i>Cyclopoida</i>	559	258	634	505	86	409	102	656	860	441	652	121	108	215	215	72	72	258	516	462	344	395	58		
<i>Harpacticoida</i>	1116	602	430	215	151	503	173	237			79	79	108	215	215	179	36	86	688	484	430	422	125		
Ostracoda																									
<i>SpeciesA</i>	2452	2247	1677	419	312	1422	450	903	2366	430	1233	583	1398	1075	1075	1183	108	1903	3957	8817	14194	7218	2740		
<i>SpeciesB</i>	387	430	237	323	22	280	72											688	1376	247	1376	922	277		
<i>SpeciesC</i>			129	22		30	25																		
Amphipoda																									
<i>Gammarus</i>						22	4																		
Collembola			11	11		4	3						11	54		22	16					86	22	22	
Ephemeroptera																									
<i>Baetidae</i>																									
<i>Baetis (a)</i>																									
<i>Baetis</i>					11	2	2							452	54	290	265	116			43		11	11	
<i>Centropilum</i>																									
<i>Ephemerellidae</i>																									
<i>Ephemerella</i>																									
<i>Leptophlebiidae</i>																									
Plecoptera																									
<i>Perlidae</i>		11				19	19																		
<i>Cutleria</i>						2	2		32	118	50	35	11		32	14	9								
<i>Isoperla</i>							4																		
<i>Sialis</i>		11	11	22		9	4													11		3	3		
<i>Nemoura</i>							5																		
<i>Soyedina</i>		22		22		9	5													22	11	11	4		
Hemiptera																									
<i>Corixidae</i>																									
Trichoptera																									
<i>Brachycentridae</i>																									
<i>Brachycentrus</i>																									
<i>Hydropsychidae</i>																									
<i>Potamyla</i>																									
Trichoptera																									
<i>Limnephilidae</i>																									
<i>Grensia</i>	258	43	129	108	172	142	36	43	32	22	32	6	312	1000	1118	810	251								
<i>Limnephilus</i>																					32	11	22	16	7
Coleoptera																									
<i>Curculionidae</i>																									
<i>Dytiscidae(a)</i>																									
<i>Dytiscidae</i>	86		11			19	17																		
<i>Hydroporus</i>						2	2	22	22		14	7													
<i>Copitotomus (a)</i>																									
<i>Oreodytes (a)</i>																									
<i>Oreodytes (l)</i>																					11		3	3	
<i>Hygrotus</i>																									
<i>Halplidae</i>						11	2																		
<i>Brychius (a)</i>		11				2	2																		
<i>Brychius</i>	215	129			108	90	41	22	11	11	14	4			11	11	7	4							
<i>Halplius (a)</i>				22	32	11	7																		
<i>Halplius (l)</i>				129</																					

Appendix E10. Benthic macroinvertebrate densities (individuals/m²) in streams of the Meliadine Study Area, 1997 and 1998

Taxa	B6-7						D0-1						D6-7						ML-PL					
	July 1998						July 1997						July 1997						July 1997					
	Rep 1	Rep 2	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 3	Rep 4	Rep 5	Mean	SE	
Bryozoa																								
Coelenterata																								
<i>Hydra</i>	1774	15699	6796	12011	3925	3925	3000	2785	1355	2380	516	602	430	1247	760	249	2075	2914	3957	4387	3333	521		
Turbellaria	215	215			108	62						43			29	14					194	48	48	
Nematoda	5215	1516	495	688	1978	1101	1022	806	1387	1072	169	710	914	548	724	106	699	333	774	1011	704	140		
Oligochaeta																								
Enchytraeidae	280	215	11	215	180	58	613	387	1032	677	189	97	860	43	333	264	634	301	860	774	642	123		
Lumbriculidae			43	22	118	46						43			14	14	151					38	38	
Naididae	462	1591	914	892	965	233	172	1602	645	806	421	441	581	1538	853	345	32		172	86	73	38		
Tubificidae	2796	237	226	247	876	640	65	32	32	43	11	75	43	11	43	19		108	129	129	91	31		
Hirudinea																								
<i>Piscicola</i>																								
Gastropoda																								
Ancyliidae																								
<i>Ferrissia</i>																								
Hydrobiidae																								
Lymnaeidae																								
Physidae																								
<i>Physa</i>																								
<i>Physella</i>	32	43	97	151	81	27	505	247	43	265	134													
Valvatidae																								
<i>Valvata sincera h.</i>																								
<i>Valvata sincera h.</i>																								
<i>Valvata sincera h.</i>																								
Tardigrada																								
Hydracarina	462	247	65	32	202	99	54	763	860	559	254	355	376	215	315	51	258	11	86	108	116	52		
Arachnida																								
<i>Dolomedes</i>																								
Conchostraca																								
<i>Dolomedes</i>																								
Cladocera																								
Bosminidae																								
<i>Bosmina</i>	3441	4333	3882	4516	4043	241	172	43		72	52													
Chydoridae	1290	2796	1075	2581	1935	439				57	29													
Daphnia	645	215	473	430	387	137						11			4	4	11882	4086	8430	3355	6938	1992		
Holopediidae																								
<i>Holopedium</i>	5591	3667	6118	7548	5731	803	172			57	57													
Sididae																								
<i>Diaphanosoma</i>																								
Copepoda																								
Calanoida	10591	4323	10849	11548	9328	1681	258	86		115	76													
Cyclopoida	4731	1720	5860	3667	3995	880				151	81	86	54	258	29	29	8882	12086	8516	5118	8651	1425		
Harpacticoida	22	226			116	61	1118	86	774	659	303	344	54	258	219	86	806	785	2839	473	1226	543		
Ostracoda																								
SpeciesA	860	4118	645	2151	1944	797	4634	1548	3258	3147	893	2194	860	1204	1419	400	903	258	344	1333	710	252		
SpeciesB																								
SpeciesC																								
Amphipoda																								
<i>Gammarus</i>										32	32	22	29	4										
Collembola																								
<i>Gammarus</i>																								
Ephemeroptera																								
Baetidae																								
<i>Baetis (a)</i>																								
<i>Baetis (a)</i>																								
Centropilum																								
Ephemerellidae																								
<i>Ephemerella</i>																								
Leptophlebiidae																								
Plecoptera																								
Perlodidae	11	11			3	3																		
<i>Cultus</i>																								
<i>Isoperla</i>																								
<i>Skweta</i>																								
Nemouridae																								
<i>Nemoura</i>	11	22	11	11	13	3	763	1022	527	771	143	11	54	22	16	376	419	1935			683	428		
<i>Soyedina</i>																								
Hemiptera																								
Corixidae																								
Trichoptera																								
Brachycentridae																								
<i>Brachycentrus</i>																								
Hydropsychidae																								
<i>Potamyia</i>																								
Trichoptera																								
Limnephilidae	11	22	22	11	16	3	11			4	4	54			18	18	11			495	126	123		
<i>Grensia</i>																								
<i>Limnephilus</i>																								
Coleoptera																								
Curculionidae																								
Dytiscidae(a)																								
Dytiscidae																								
<i>Hydroponus</i>																								
<i>Copelotomus (a)</i>																								
<i>Oreodytes (a)</i>	11				3	3	11			4	4													
<i>Oreodytes (l)</i>																								
<i>Hygrotus</i>																								
Halplidae																								
<i>Brychius (a)</i>																								
<i>Brychius</i>																								

Appendix E11. Chironomid larvae densities (individuals/m²) in streams of the Meliadine Study Area, 1997 and 1998

Taxa	A0-1						A0-1						A5-6						A7-8								
	July 1997						July 1998						July 1997						July 1998								
	Rep 1	Rep 2	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 4	Mean	SE	Rep 1	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 4	Rep 5	Mean	SE
Chironomini																											
<i>Chironomus</i>	86						452 215 222						215 72 72						86 22 22								
<i>Cladopelma</i>																											
<i>Cryptochironomus</i>																											
<i>Dicrotendipes</i>							86 29 29																				
<i>Glyptotendipes</i>																											
<i>Microtendipes</i>																											
<i>Pagastiella</i>																											
<i>Parachironomus</i>																											
<i>Polypedilum</i>							43 11 11 22 11																				
<i>Stictochironomus</i>																											
<i>Paratendipes</i>																											
<i>Phaenopsectra</i>	11																										
Diametinae																											
<i>Potthastia (Longimanus)</i>	75 65 43 22 51 12						108 36 36 226 247 22 165 72																				
<i>Protanypus</i>																											
<i>Pseudokiefferiella</i>																											
<i>Syndiamesa</i>																											
Prodiamesinae																											
<i>Monodiamesa</i>																											
Orthoclaadiinae	1645 1333 86 946 1003 337						548 806 774 710 81						7548 13269 11613 10810 1699						16204 23280 22882 20789 2295								
<i>Abiskomyia</i>																											
<i>Chaetocladius(?)</i>																											
<i>Corynoneura</i>	2978 5323 3011 1237 3137 838						3925 1172 2161 2419 805						2860 3892 3763 3505 325						3882 7032 7140 6018 1069								
<i>Cricotopus</i>	387 194 22 151 90						172 11 61 56						2129 108 215 817 657						1656 1656 2333 774 1605 320 10237 7570 129 4484 2609								
<i>Cricotopus/Orthocladus</i>	1720 430 430																										
<i>Eukiefferiella</i>	43 86 32 21												1032 22 351 341														
<i>Heleniella</i>																											
<i>Heterotanytarsus</i>																											
<i>Heterotrissocladius</i>																											
<i>Nanocladius</i>							118 11 43 38																				
<i>Orthocladus</i>	344 22 22 97 83												22 22 22 22 0						5591 258 108 1489 1368								
<i>Orthocladus/Cricotopus</i>							323 75 133 97																				
<i>Paracricotopus</i>																											
<i>Paraphaenocladus</i>																			118 129 54 100 24								
<i>Psectrocladius</i>																											
<i>Pseudosmittia</i>																											
<i>Stilocladius(?)</i>																											
<i>Tvetenia</i>																											
Tanypodinae																											
<i>Ablabesmyia</i>	97 11 27 23 22 32 75 32 16						75 25 25						65 43 22 43 12 22 7 7						11 4 4 22 65 75 40 18								
<i>Guttipelopia</i>																											
<i>Natarsia</i>																			11 4 4								
<i>Pentaneurella</i>																											
<i>Procladius</i>							11 11 7 4																				
<i>Thienemannimyia</i>	32 8 8																		86 22 22								
Tanytarsini	11 290 75 72						2462 591 935 1330 575						108 43 50 31 22 7 7						32 11 11 172 43 43 65 16 16								
<i>Cladotanytarsus</i>																											
<i>Cladotanytarsus/Paratanytarsus</i>																											
<i>Constempellina</i>																											
<i>Corynocera</i>																											
<i>Micropsectra</i>																											
<i>Micropsectra/Tanytarsus</i>							290 32 32 118 86																				
<i>Paratanytarsus</i>	11 86 24 21						280 290 140 237 48						11 32 32 25 7						43 11 11								
<i>Rheotanytarsus</i>																											
<i>Stempellinella</i>																											
<i>Tanytarsus</i>	215 54 54																										
Total Chironomid Density	5505	7258	5215	2602	5145	960	8839	3269	4559	5556	1683	13763	17376	15699	15613	1044	20215	30731	30118	27022	3408	17914	17108	7763	1935	11180	3847

Appendix E11. Chironomid larvae densities (individuals/m²) in streams of the Meliadine Study Area, 1997 and 1998

Taxa	A7-8						B1-2										B3-4						
	July 1998						July 1997					July 1998					July 1998						
	Rep 1	Rep 2	Rep 4	Rep 5	Mean	SE	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 3	Rep 4	Rep 5	Mean	SE
Chironomini								108			27	27	645	215	11	290	187						
<i>Chironomus</i>																							
<i>Cladopelma</i>																							
<i>Cryptochironomus</i>																							
<i>Dicrotendipes</i>									22		5	5											
<i>Glyptotendipes</i>																							
<i>Microtendipes</i>																							
<i>Pagastiella</i>																							
<i>Parachironomus</i>													32	11	32	25	7						
<i>Polypedilum</i>																							
<i>Stictochironomus</i>																							
<i>Paratendipes</i>																							
<i>Phaenopsectra</i>																							
Diamesinae										11	3	3											
<i>Potthastia (Longimanus)</i>								22	32	43	24	9	32			11	11		11	11	11	8	3
<i>Protanypus</i>																							
<i>Pseudokiefferiella</i>								581		97	169	139											
<i>Syndiamesa</i>													22	32	129	61	34						
Prodiamesinae																							
<i>Monodiamesa</i>																							
Orthoclaadiinae	7656	1075	9129	4763	5656	1776		237		473	177	113		452		151	151	226	441	333	484	371	58
<i>Abiskomyia</i>																							
<i>Chaetocladius(?)</i>													387			129	129	22				5	5
<i>Corynoneura</i>	8118	1441	3710	2559	3957	1462	1505	677	860	903	987	180	3011	1333	1720	2022	507	882	1989	1108	4742	2180	887
<i>Cricotopus</i>	65				16	16	1505	731	914	11	790	308		1731	108	613	560	11	32	11		13	7
<i>Cricotopus/Orthoclaadius</i>																							
<i>Eukiefferiella</i>	118	54	269		110	58	688		1161	2366	1054	498											
<i>Heleniella</i>																							
<i>Heterotanytarsus</i>																							
<i>Heterotrissoclaadius</i>																							
<i>Nanoclaadius</i>																				22		5	5
<i>Orthoclaadius</i>				22	5	5			258		65	65	656			219	219	11				3	3
<i>Orthoclaadius/Cricotopus</i>													2613	957	5312	2961	1269	108	559	333	441	360	96
<i>Paracricotopus</i>							161			387	137	92											
<i>Paraphaenoclaadius</i>																				11		3	3
<i>Psectrocladius</i>															32	11	11						
<i>Pseudosmittia</i>																							
<i>Stiloclaadius(?)</i>																							
<i>Tvetenia</i>														215		72	72						
Tanypodinae							108	172			70	42		215		72	72						
<i>Ablabesmyia</i>										355	91	88											
<i>Guttipelopia</i>																							
<i>Natarsia</i>																							
<i>Pentaneurella</i>																							
<i>Procladius</i>				11	3	3							11		22	11	6						
<i>Thienemannimyia</i>																							
Tanytarsini		11	11		5	3	43	86	43		43	18	430	11	215	219	121	215		441	215	218	90
<i>Cladotanytarsus</i>								409			102	102											
<i>Cladotanytarsus/Paratanytarsus</i>																							
<i>Constempellina</i>																							
<i>Corynocera</i>																							
<i>Micropsectra</i>																							
<i>Micropsectra/Tanytarsus</i>																							
<i>Paratanytarsus</i>	43			11	13	10		54	204		65	48	43	43	43	43			11	108	11	32	25
<i>Rheotanytarsus</i>							118				30	30	269	1075	1559	968	376	11	151	22		46	35
<i>Stempellinella</i>																							
<i>Tanytarsus</i>							32				8	8											
Total Chironomid Density	16000	2581	13118	7366	9766	2993	3742	3183	3570	4892	3847	368	8151	6290	9183	7875	846	1473	3054	2527	5925	3245	952

Appendix E11. Chironomid larvae densities (individuals/m²) in streams of the Meliadine Study Area, 1997 and 1998

Taxa	B4-5						B5-6						B6-7											
	July 1997						July 1998						July 1998						July 1997					
	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 2	Rep 3	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 5	Mean	SE	
Chironomini		11				2	2											1376			194	392	331	
<i>Chironomus</i>																								
<i>Cladopelma</i>																								
<i>Cryptochironomus</i>																								
<i>Dicrotendipes</i>				11	11	4	3																	
<i>Glyptotendipes</i>			11			2	2																	
<i>Microtendipes</i>																								
<i>Pagastiella</i>			11			2	2																	
<i>Parachironomus</i>																								
<i>Polypedilum</i>																								
<i>Stictochironomus</i>																								
<i>Paratendipes</i>																				2366		591	591	
<i>Phaenopsectra</i>																								
Diamesinae																								
<i>Poithastia (Longimanus)</i>																								
<i>Protanypus</i>																								
<i>Pseudokiefferiella</i>																								
<i>Syndiamesa</i>																								
Prodiamesinae																								
<i>Monodiamesa</i>																								
Orthoclaadiinae	6710	2774	957	430	290	2232	1204	430	11	538	326	161	355		11	122	117	1978	86		12495	3640	2987	
<i>Abiskomyia</i>																								
<i>Chaetoclaadius(?)</i>																								
<i>Corynoneura</i>	2882	2656	2516	3892	290	2447	591	892	1075	1183	1050	85		54	645	233	207	3462	9043	194	8839	5384	2159	
<i>Cricotopus</i>	129			925		211	180		11		4	4		11	226	79	74	11	43		731	196	179	
<i>Cricotopus/Orthoclaadius</i>			409			82	82																	
<i>Eukiefferiella</i>								1312	108	129	516	398												
<i>Heleniella</i>																								
<i>Heterotanytarsus</i>																								
<i>Heterotrissoclaadius</i>																								
<i>Nanoclaadius</i>																								
<i>Orthoclaadius</i>				11	22	6	4											11				3	3	
<i>Orthoclaadius/Cricotopus</i>														54	11	22	16							
<i>Paracricotopus</i>			75			15	15																	
<i>Paraphaenoclaadius</i>																								
<i>Psectrocladius</i>																								
<i>Pseudosmittia</i>																								
<i>Stiloclaadius(?)</i>																								
<i>Tvetenia</i>																								
Tanypodinae	817	97	75		22	202	155	860			287	287	11			4	4	430	258		774	366	162	
<i>Ablabesmyia</i>	129	151			183	92	39											22	65		129	54	28	
<i>Guttipelopia</i>																								
<i>Natarsia</i>																				11		3	3	
<i>Pentaneurella</i>																								
<i>Procladius</i>								22	32	32	29	4	11	75	32	39	19							
<i>Thienemannimyia</i>			634	462		219	137														161	40	40	
Tanytarsini	430	280			11	144	89	430	688	108	409	168		54	11	22	16	172	258			108	65	
<i>Cladotanytarsus</i>	258	54	118			86	48												32		65	24	15	
<i>Cladotanytarsus/Paratanytarsus</i>																								
<i>Constempellina</i>			172	22		39	34																	
<i>Corynocera</i>																								
<i>Micropsectra</i>		22	22			9	5																	
<i>Micropsectra/Tanytarsus</i>								2409	935	2108	1817	449	22	11		11	6							
<i>Paratanytarsus</i>			22	22		9	5	1269	624	570	821	225	32	11	32	25	7			151		38	38	
<i>Rheotanytarsus</i>																								
<i>Stempellinella</i>																				32		8	8	
<i>Tanytarsus</i>			97	656	97	170	123											75				19	19	
Total Chironomid Density	11355	6043	5118	6430	925	5974	1664	7624	3484	4667	5258	1231	430	269	968	556	211	6161	11161	2914	23226	10866	4456	

Appendix E11. Chironomid larvae densities (individuals/m²) in streams of the Meliadine Study Area, 1997 and 1998

Taxa	ML-PL						ML-MR										MR-L						
	July 1998						July 1997					July 1998					July 1998						
	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	Rep 1	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Mean	SE	
Chironomini																		22				7	7
<i>Chironomus</i>																							
<i>Cladopelma</i>																							
<i>Cryptochironomus</i>																		11				4	4
<i>Dicrotendipes</i>							301			100	100	32	43		32	27	9						
<i>Glyptotendipes</i>																							
<i>Microtentipes</i>																							
<i>Pagastiella</i>																							
<i>Parachironomus</i>																							
<i>Polypedilum</i>																							
<i>Stictochironomus</i>																		11	11	11		11	
<i>Paratendipes</i>																							
<i>Phaenopsectra</i>																							
Diamesinae																							
<i>Potthastia (Longimanus)</i>																							
<i>Protanypus</i>																							
<i>Pseudokiefferiella</i>	312				78	78	22			7	7	32	129	43	43	62	23	215				72	72
<i>Syndiamesa</i>																							
Prodiamesinae																							
<i>Monodiamesa</i>																							
Orthoclaadiinae	731				183	183						5022	2495	1194	2667	2844	797	473	387	710		523	96
<i>Abiskomyia</i>													11			3	3						
<i>Chaetocladius(?)</i>																							
<i>Corynoneura</i>	355				89	89	2151			717	717				430	108	108		108			36	36
<i>Cricotopus</i>	430				108	108	10968			3656	3656	11	333	129	22	124	75		151			50	50
<i>Cricotopus/Orthoclaadius</i>																							
<i>Eukiefferiella</i>																				376		125	125
<i>Heleniella</i>																				11		4	4
<i>Heterotanytarsus</i>																							
<i>Heterotrissocladius</i>																							
<i>Nanocladius</i>												22			430	113	106				22	7	7
<i>Orthoclaadius</i>	946				237	237								22		5	5						
<i>Orthoclaadius/Cricotopus</i>												10645	14538	10290	6086	10390	1727	161			86	82	47
<i>Paracricotopus</i>																							
<i>Paraphaenoclaadius</i>												1194	43	226	32	374	277	11			22	11	6
<i>Psectrocladius</i>							22			7	7	32				8	8						
<i>Pseudosmittia</i>																							
<i>Stilocladius(?)</i>																							
<i>Tvetenia</i>																							
Tanypodinae												54				13	13	269	22	32		108	81
<i>Ablabesmyia</i>																							
<i>Guttipelopia</i>																							
<i>Natarsia</i>																							
<i>Pentaneurella</i>													65	32	32	32	13						
<i>Procladius</i>																							
<i>Thienemannimyia</i>																							
Tanytarsini							86			29	29	441	11			113	109				86	29	29
<i>Cladotanytarsus</i>							108			36	36												
<i>Cladotanytarsus/Paratanytarsus</i>																							
<i>Constempellina</i>																		11			151	54	48
<i>Corynocera</i>																							
<i>Micropsectra</i>																							
<i>Micropsectra/Tanytarsus</i>																							
<i>Paratanytarsus</i>	11				3	3						215	215			108	62		22	11		11	6
<i>Rheotanytarsus</i>												1237	957	75	548	704	253			11		4	4
<i>Stempellinella</i>																							
<i>Tanytarsus</i>																							
Total Chironomid Density	2785				696	696	13656			4552	4552	18935	18839	12011	10323	15027	2255	1183	699	1527		1136	240

Appendix E12. Depth and substrate data at benthic macroinvertebrate sampling sites in lakes of the Meliadine Study Area, 1997 and 1998.

Lake	Date	Sample Depth (m)	Replicates Collected ^a	Substrate Description
A6	23-Jul-97	2.5	5	brown silt
A6	24-Jul-98	3.9	5	brown silt
A8	22-Jul-97	3.6	5	black silt
A8	23-Jul-98	2.8	5	marbled brown and black silt
B2	21-Jul-97	2.6	5	brown silt
B2	21-Jul-98	3.0	5	brown silt
B5	19-Jul-97	2.8	5	brown silt
B5	20-Jul-98	2.0	5	brown silt
B7	18-Jul-97	3.2	5	brown silt
B7	19-Jul-98	3.5	5	brown silt
D7	17-Jul-97	2.2	5	brown silt
G1	24-Jul-97	2.3	5	brown silt
LML	29-Jul-98	14.5	5	grey-brown silt
ML-E	19-Jul-97	14.7	5	brown silt
ML-E	17-Jul-98	12.0	5	brown silt under 5 mm of rust colour
ML-S	20-Jul-97	6.3	1	silt/sand/gravel
ML-S	25-Jul-98	16.5	5	marbled brown and black silt
ML-SE	22-Jul-98	3.0	5	brown silt under 5 mm of rust colour
ML-W	20-Jul-97	8.0	5	brown silt
ML-W	27-Jul-98	6.5	5	brown silt
PL	28-Jul-98	18.0	5	orange clay under 5 mm sand/gravel

^a not all replicates were analyzed

Appendix E13. Benthic macroinvertebrate densities (individuals/m²) in lakes of the Meliadine Study Area, 1997 and 1998

Taxa	Meliadine Lake East (ML-E)											Meliadine Lake South (ML-S)						
	July 1997						July 1998					Jul-97	July 1998					
	Rep 1	Rep 2	Rep 3	Rep 5	Mean	SE	Rep 1	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 1	Rep 2	Rep 4	Rep 5	Mean	SE
Coelenterata																		
Hydridae																		
<i>Hydra</i>	43				11	11												
Turbellaria																		
								43	14	14								
Nematoda	696	522	435	304	489	82						6696	2435	7522	1783	435	3043	1550
Oligochaeta																		
Enchytraeidae	478		87	43	130	116						348				435	109	109
Lumbriculidae				43	11	11												
Naididae	87		87		43	25						739	174	304			120	74
Tubificidae	174				43	43	43	261	304	203	81	87						
Gastropoda																		
Hydrobiidae																		
Physidae																		
<i>Physa</i>																		
Valvatidae																		
<i>Valvata sincera h.</i>	87	87	174		87	35		217	130	116	63	87	43	609	565		304	164
Pelecypoda																		
Sphaeriidae																		
<i>Sphaerium</i>	304	174	304	783	391	134	783	391	739	638	124	261	435	2478	1348	261	1130	509
<i>Pisidium</i>	43				11	11						174						
Tardigrada																		
Hydracarina	261		609	43	228	139		87	43	43	25	435	43	435	217		174	99
Conchostraca																		
Cladocera																		
Bosminidae																		
<i>Bosmina</i>	130		522		163	123												
Chydoridae			43		11	11			43	14	14			304		435	185	110
Daphnidae																		
<i>Daphnia</i>	130	174	435		185	91						87						
Holopedidae																		
<i>Holopedium</i>		130	87	43	65	28												
Copepoda																		
Calanoida	43	43	87	130	76	21								304			76	76
Cyclopoida	696	348	522	217	446	104	217	87	696	333	185	783		870	348		304	205
Harpacticoida	217			43	65	52						783		304	174		120	74
Ostracoda																		
Species A	87	43	304		109	68	43	87	130	87	25	174	174	1739	1043		739	404
Species B	43			43	22	13						696						
Species C			43		11	11												
Amphipoda																		
<i>Gammarus</i>		43			11	11						261						
Collembola																		
Plecoptera																		
Perlodidae																		
<i>Skwala</i>								43	14	14								
Hemiptera																		
Trichoptera																		
Limnephilidae																		
<i>Grensia</i>												43						
Coleoptera																		
Ditiscidae																		
<i>Liodessus</i>																		
Coleoptera																		
Haliplidae																		
<i>Brychius</i>												87						
Diptera (a)																		
Diptera (p)																		
Diptera																		
Chaoboridae																		
Chironomidae (a)								43		14	14							
Chironomidae (p)			87	43	33	21		87	43	43	25	739		87	43		33	21
Chironomidae (l)	2304	652	1435	1565	1489	338	1522	4174	2783	2826	766	15391	1478	7652	7174	217	4130	1915
Culicidae (a)																		
Simuliidae (a)																		
Tipulidae (l)																		
Hymenoptera (a)																		
Homoptera																		
Terrestrial																		
												43						
Total Density	4826	1522	3522	2826	3174	689	2391	5217	4217	3942	827	26435	4783	21043	12304	1348	9870	4371

NOTES: (a) = adult; (p) = pupa; (l) = larvae; P = present; Total number of taxa includes chironomids identified to genus in Appendix E14. Shaded taxa are pelagic or terrestrial groups, not included in totals

Appendix E13. Benthic macroinvertebrate densities (individuals/m²) in lakes of the Meliadine Study Area, 1997 and 1998

Taxa	Meliadine Lake Southeast (ML-SE)							Meliadine Lake West (ML-W)											
	July 1998							July 1997					July 1998						
	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 3	Rep 5	Mean	SE	
Coelenterata																			
Hydridae																			
<i>Hydra</i>																			
Turbellaria	304		217		435	191	85						130		43	58	38		
Nematoda	2870	11957	12174	9565	19652	11243	2693	609	348	870	826	663	120	1870	1783	522	1391	436	
Oligochaeta																			
Enchytraeidae	870					174	174						22	22	43		14	14	
Lumbriculidae	43	130	87			52	25	43				11	11						
Naididae	87	1739	3043	1826	3174	1974	558	43	43	43	33		11	43	261	130	145	63	
Tubificidae	304		261				113	70						87		87	58	29	
Gastropoda																			
Hydrobiidae																			
Physidae																			
<i>Physa</i>																			
Valvatidae																			
<i>Valvata sincera h.</i>	87						17	17											
Pelecypoda																			
Sphaeriidae	217	1130	1130	1826	3174	1496	491						348		304	435	362	38	
<i>Sphaerium</i>									304	43	43	43	109	65					
<i>Pisidium</i>													11	11					
Tardigrada																			
Hydracarina	87	43	957			1174	452	253	43		43		22	13	174	43	87	101	38
Conchostraca																			
Cladocera																			
Bosminidae																			
<i>Bosmina</i>														435		145	145		
Chydoridae					2609	522	522						435	478	652	522	66		
Daphnidae														130		43	43		
<i>Daphnia</i>																			
Holopedidae																			
<i>Holopedium</i>																			
Copepoda																			
Calanoida	304						61	61						261		87	87		
Cyclopoida	261	2043	1304	652	1739	1200	331	130	43			43	31	130	391	348	290	81	
Harpacticoida	304	1739	652			539	323	391	478	43	130	261	103	1870	1000	957	1275	297	
Ostracoda																			
Species A	87	870	435	870	2174	887	354	130	391	43		141	88	870	1000	1652	1174	242	
Species B									87	348			109	82					
Species C																			
Amphipoda																			
<i>Gammarus</i>	348		43		3783		835	740						43		43	43	43	
Collembola																			
Plecoptera																			
Perlodidae																			
<i>Skwala</i>																			
Hemiptera																			
Trichoptera																			
Limnephilidae																			
<i>Grensia</i>																			
Coleoptera																			
Ditiscidae																			
<i>Liodessus</i>																			
Coleoptera																			
Haliplidae																			
<i>Brychius</i>																			
Diptera (a)			43				9	9											
Diptera (p)																			
Diptera																			
Chaoboridae																			
Chironomidae (a)																			
Chironomidae (p)									87	87			43	25	522	652	304	493	101
Chironomidae (l)	1522	19174	30826	15261	105348	34426	18338	696	696	174	174	435	151	9478	8217	3087	6928	1954	
Culicidae (a)																			
Simuliidae (a)																			
Tipulidae (l)																			
Hymenoptera (a)																			
Homoptera																			
Terrestrial																			
Total Density	4870	37174	50478	30565	138913	52400	22865	2217	2478	1174	1391	1815	315	14696	12870	7087	11551	2293	

NOTES: (a) = adult; (p) = pupa; (l) = larvae; P = present; Total number of taxa includes chironomids identified to genus in Appendix E14.

Shaded taxa are pelagic or terrestrial groups, not included in totals

Appendix E13. Benthic macroinvertebrate densities (individuals/m²) in lakes of the Meliadine Study Area, 1997 and 1998

Taxa	Peter Lake (PL)					Little Meliadine Lake (LML)							A6						
	July 1998					July 1998							July 1997						
	Rep 2	Rep 3	Rep 4	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 3	Rep 4	Rep 5	Mean	SE	
Coelenterata																			
Hydridae <i>Hydra</i>						43					9	9	478			261	185	116	
Turbellaria	217	435	174	275	81	1739		87	304	522	530	315							
Nematoda	826	652	3304	1594	857	8130	1783	2652	7522	1130	4243	1486	1348	2652	1130	3217	2087	505	
Oligochaeta																			
Enchytraeidae	261	565	652	493	119														
Lumbriculidae			43	14	14	130	87	87	43	43	78	16	43				11	11	
Naididae	261	130	348	246	63	391	217	87	565	87	270	93	1043	1739	1348	2609	1685	339	
Tubificidae						87	43		609		148	116							
Gastropoda																			
Hydrobiidae																			
Physidae <i>Physa</i>																			
Valvatidae <i>Valvata sincera h.</i>	217	391	87	232	88	261	130	130	478	130	226	68	43	652	217	783	424	175	
Pelecypoda																			
Sphaeriidae <i>Sphaerium</i>	87	174	261	174	50	1783	1957	304	478	391	983	364	696	1522	43	174	609	335	
<i>Pisidium</i>													130	522	217	391	315	88	
Tardigrada													43				11	11	
Hydracarina	43	304	87	145	81	348		435	304		217	91	348		43		98	84	
Conchostraca																			
Cladocera								87			17	17							
Bosminidae <i>Bosmina</i>									174	304	261	148	64						
Chydoridae			43	14	14						87	17	17	826				207	207
Daphnidae <i>Daphnia</i>	348	217	304	290	38	1739	217	522		348	565	306							
Holopedidae <i>Holopedium</i>		130		43	43	565		174	304	87	226	99							
Copepoda																			
Calanoida	261		174	145	77			522	870	913	461	200	696	261	87		261	155	
Cyclopoida	696	478	478	551	72	4913	3696	174	7522	1217	3504	1313	565	348	261	261	359	72	
Harpacticoida		43	217	87	66	9565	11957	2870	15913	4522	8965	2393	2043	3043	1783	2783	2413	298	
Ostracoda																			
Species A	87	217	43	116	52	1739	1304	304	1435	87	974	327	261				65	65	
Species B													130	261	130		130	53	
Species C													304				76	76	
Amphipoda																			
<i>Gammarus</i>															43		11	11	
Collembola															43		11	11	
Plecoptera													43				11	11	
Perlodidae <i>Skwala</i>																			
Hemiptera																			
Trichoptera																			
Limnephilidae <i>Grensia</i>														43			11	11	
Coleoptera																			
Ditiscidae <i>Liodessus</i>																			
Coleoptera																			
Halipidae <i>Brychius</i>														43			11	11	
Diptera (a)			43	14	14														
Diptera (p)														43			11	11	
Diptera																			
Chaoboridae																			
Chironomidae (a)	391	217	87	232	88		87		304		78	59							
Chironomidae (p)						696	130	348	217		278	119	130	43		87	65	28	
Chironomidae (l)	1348	1261	1609	1406	105	5174	4913	2087	3870	826	3374	837	1609	5652	1043	3652	2989	1050	
Culicidae (a)																			
Simuliidae (a)	87	43		43	25														
Tipulidae (l)	43			14	14														
Hymenoptera (a)						43				87	26	17							
Homoptera																			
Terrestrial	43			14	14										43		11	11	
Total Density	3391	4174	6826	4797	1039	29391	22391	9043	31522	7739	20017	4985	8565	16087	6043	13870	11141	2319	

NOTES: (a) = adult; (p) = pupa; (l) = larvae; P = present; Total number of taxa includes chironomids identified to genus in Appendix E14. Shaded taxa are pelagic or terrestrial groups, not included in totals

Appendix E13. Benthic macroinvertebrate densities (individuals/m²) in lakes of the Meliadine Study Area, 1997 and 1998

Taxa	A6					A8									
	July 1998					July 1997					July 1998				
	Rep 1	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 4	Mean	SE	Rep 2	Rep 4	Rep 5	Mean	SE
Coelenterata															
Hydridae		174	217	130	66							43	565	203	182
<i>Hydra</i>															
Turbellaria	652	348		333	188						1174			391	391
Nematoda	2174	1217	2174	1855	319	3348	7435	5957	5580	1195	54739	43652	20913	39768	9956
Oligochaeta															
Enchytraeidae															
Lumbriculidae															
Naididae	1304	870	2522	1565	494	391	130	304	275	77	15217	28130	13435	18928	4630
Tubificidae															
Gastropoda															
Hydrobiidae		174		58	58										
Physidae															
<i>Physa</i>															
Valvatidae															
<i>Valvata sincera h.</i>	217	261	304	261	25	43	174	261	159	63	3783	4130	913	2942	1019
Pelecypoda															
Sphaeriidae	2087	2130	3087	2435	326						2261	2522	1870	2217	190
<i>Sphaerium</i>						217	43	783	348	223					
<i>Pisidium</i>							174	43	72	52					
Tardigrada															
Hydracarina	304	435		246	129						2304	3478	1739	2507	512
Conchostraca															
Cladocera															
Bosminidae															
<i>Bosmina</i>	435	174		203	126										
Chydoridae		348		116	116										
Daphnidae															
<i>Daphnia</i>															
Holopedidae															
<i>Holopedium</i>															
Copepoda															
Calanoida	2391	1391	652	1478	504	304	130	43	159	77	1174	870	565	870	176
Cyclopoida	5217	3130	4348	4232	605	174	130		101	52	1174	1739		971	512
Harpacticoida	1522	2261	3043	2275	439	1217	261	304	594	312	1739	2609	4652	3000	863
Ostracoda															
Species A	3043	1739	2609	2464	383						565	2609	1174	1449	606
Species B						217			72	72					
Species C															
Amphipoda															
<i>Gammarus</i>															
Collembola															
Plecoptera															
Perlodidae							43		14	14					
<i>Skwala</i>							43		14	14					
Hemiptera															
Trichoptera															
Limnephilidae															
<i>Grensia</i>			43	14	14										
Coleoptera															
Ditiscidae															
<i>Liodessus</i>															
Coleoptera															
Halplidae															
<i>Brychius</i>							87		29	29					
Diptera (a)	478		217	232	138						609			203	203
Diptera (p)															
Diptera															
Chaoboridae															
Chironomidae (a)															
Chironomidae (p)	43			14	14						130	87	43	87	25
Chironomidae (l)	5739	6522	7000	6420	367	2087	3870	4043	3333	625	217130	205478	109609	177406	34065
Culicidae (a)												43		14	14
Simuliidae (a)															
Tipulidae (l)															
Hymenoptera (a)															
Homoptera															
Terrestrial															
Total Density	17043	16130	21000	18058	1494	7522	12261	11696	10493	1494	298913	292652	154870	248812	47006

NOTES: (a) = adult; (p) = pupa; (l) = larvae; P = present; Total number of taxa includes chironomids identified to genus in Appendix E14.

Shaded taxa are pelagic or terrestrial groups, not included in totals

Appendix E13. Benthic macroinvertebrate densities (individuals/m²) in lakes of the Meliadine Study Area, 1997 and 1998

Taxa	B2														
	July 1997						July 1998								
	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Mean	SE	
Coelenterata															
Hydridae															
<i>Hydra</i>															
Turbellaria									1174	304		304	565	470	198
Nematoda	826	1174	6609	1000	870	2096	1130	2435	2304	1783	913	1739	1835	269	
Oligochaeta															
Enchytraeidae															
Lumbriculidae															
Naididae	87	304	174	87		130	51	870					174	174	
Tubificidae								43		87			26	17	
Gastropoda															
Hydrobiidae															
Physidae															
<i>Physa</i>			87			17	17								
Valvatidae															
<i>Valvata sincera h.</i>			261	87		70	51	87	174		43		61	33	
Pelecypoda															
Sphaeriidae															
<i>Sphaerium</i>	174	391	1957	217	826	713	332	2870	739	1913	1609	1696	1765	341	
<i>Pisidium</i>			478	174	217	174	88								
Tardigrada															
Hydracarina		43	261	261	826	278	147	304		43	304		130	71	
Conchostraca															
Cladocera															
Bosminidae															
<i>Bosmina</i>				87	435	104	84	565		565		1174	461	219	
Chydoridae															
Daphnidae															
<i>Daphnia</i>	43	174	348	739		261	134								
Holopedidae															
<i>Holopedium</i>	87	87	174			70	33			565			113	113	
Copepoda															
Calanoida	87	43			217	70	40	565			304		174	114	
Cyclopoida		174	609	87	348	243	108	4913	1609	1174	2609	7522	3565	1182	
Harpacticoida	5739	6739	14696	12043	6652	9174	1772	6957	5087	3783	5522	4043	5078	569	
Ostracoda															
Species A			435	43	1957	487	376	67739	3913	16783	27522	48696	32930	11385	
Species B	87	304	9043	1522		2191	1735								
Species C					261	52	52								
Amphipoda															
<i>Gammarus</i>			87			17	17								
Collembola				174	435	122	85								
Plecoptera															
Perlodidae															
<i>Skwala</i>															
Hemiptera															
Trichoptera															
Limnephilidae															
<i>Grensia</i>															
Coleoptera															
Ditiscidae															
<i>Liodessus</i>											43		9	9	
Coleoptera															
Haliplidae															
<i>Brychius</i>					565	113	113				43		9	9	
Diptera (a)															
Diptera (p)															
Diptera															
Chaoboridae															
Chironomidae (a)			43			9	9		43				9	9	
Chironomidae (p)								43			43	565	130	109	
Chironomidae (l)	565	435	6391	1043	1783	2043	1112	5826	3696	9261	6870	13087	7748	1607	
Culicidae (a)															
Simuliidae (a)				87		17	17								
Tipulidae (l)															
Hymenoptera (a)															
Homoptera															
Terrestrial			87		130	43	27								
Total Density	7478	9391	40478	16652	13826	17565	5951	88304	16217	33652	43130	69826	50226	12876	

NOTES: (a) = adult; (p) = pupa; (l) = larvae; P = present; Total number of taxa includes chironomids identified to genus in Appendix E14. Shaded taxa are pelagic or terrestrial groups, not included in totals