



Maine Department of Environmental Protection
Biological Monitoring Program
Aquatic Life Classification Attainment Report

Station Information

Station Number: S-354	DEP Drainage: Androscoggin
Waterbody: Sunday River - Station 354	HUC8: 01040002
Town: Bethel	HUC8 Name: Lower Androscoggin
Directions: 60 M ABOVE MARTIN RD.	Latitude: 44 27 9.91 N
	Longitude: 70 48 42.4 W
	Stream Order: 4

Sample Information

Log Number: 1715	Type of Sample: ROCK BAG	Date Deployed: 7/9/2008
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/6/2008

Classification Attainment

Statutory Class: A	Final Determination: A	Date: 4/6/2009
Model Result with P>.6: A	Reason for Determination: Model	
Date Last Calculated: 4/6/2009	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.68	Class A, B, or C	1.00
Class B	0.31	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	1.00
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.00

Model Variables

01 Total Mean Abundance	493.00	18 Relative Abundance Ephemeroptera	0.01
02 Generic Richness	52.00	19 EPT Generic Richness	23.00
03 Plecoptera Mean Abundance	5.33	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	27.05
04 Ephemeroptera Mean Abundance	7.33	23 Relative Generic Richness- Plecoptera	0.13
05 Shannon-Wiener Generic Diversity	3.08	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	11.15
06 Hilsenhoff Biotic Index	3.76	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	2.33
07 Relative Abundance - Chironomidae	0.24	28 EP Generic Richness/14	1.07
08 Relative Generic Richness Diptera	0.35	30 Presence of Class A Indicator Taxa/7	0.57
09 <i>Hydropsyche</i> Abundance	216.99		
11 <i>Cheumatopsyche</i> Abundance	1.01		
12 EPT Generic Richness/ Diptera Generic Richness	1.28		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	1.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	10.82		
17 Chironomini Abundance (Family Functional Group)	8.79		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	44.01
2	<i>Brachycentrus</i>	13.18
3	<i>Simulium</i>	9.06
4	<i>Tvetenia</i>	5.97
5	<i>Micropsectra</i>	5.49



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Town: Bethel

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Waterbody: Sunday River - Station 354

Date Retrieved: 8/6/2008

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 20.3 deg C
Dissolved Oxygen:
Specific Conductance: 26 uS/cm
Velocity: 57 cm/s
pH: 6.09
Wetted Width: 9 m
Bankfull Width: 26 m
Depth: 45 cm

Waterbody Information - Retrieval

Temperature: 15.2 deg C
Dissolved Oxygen: 8.8 mg/l
Specific Conductance: 17 uS/cm
Velocity: 125 cm/s
pH: 5.82
Wetted Width: 26 m
Bankfull Width: 26 m
Depth: 80 cm

Water Chemistry - Retrieval

Ammonia As Nitrogen	<0.01 mg/l	Soluble Reactive Phosphorus	1 ug/l
Nitrate+nitrite As N	0.02 mg/l	Total Phosphorus	0.025 mg/l
Total Kjeldahl Nitrogen	0.1 mg/l	Total Suspended Solids	9.7 mg/l
Dissolved Organic Carbon	4.5 mg/l	Total Dissolved Solids	32 mg/l

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Hardwood	Canopy Open	Hilly Terrain

<u>Stressor</u>	<u>Location</u>	<u>Substrate</u>
Altered Hydrology Stressor	Above Road Crossing	Gravel 45 %
	Above Town	Rubble/Cobble 45 %
	Main Stem	Sand 10 %

Landcover Summary - 2004 Data

Sample Comments

SOME EVIDENCE OF ALTERED HYDROLOGY

8/6/2008: HEAVY RAIN AND HIGH WATER LEVELS; BAG 1 DISTURBED

7/9/2008: DO METER (#3) DID NOT CALIBRATE, NO MEASUREMENT WAS TAKEN



**Maine Department of Environmental Protection
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Aquatic Life Taxonomic Inventory Report**

Station Number: S-354

Waterbody: Sunday River - Station 354

Town: Bethel

Log Number: 1715

Subsample Factor: X1

Replicates: 3

Calculated: 4/6/2009

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
Enchytraeidae	08020201	0.67	0.67		--	0.1	0.1
<i>Stylodrilus</i>	08020203011		0.33		--		0.1
<i>Stylodrilus heringianus</i>	08020203011001	0.33			--	0.1	
<i>Amphinemura</i>	09020201001		0.33	2	SH		0.1
<i>Amphinemura wui</i>	09020201001003	0.33			--	0.1	
<i>Nemoura</i>	09020201002	0.33	0.33	1	SH	0.1	0.1
<i>Leuctra</i>	09020204020		0.33	0	SH		0.1
<i>Leuctra truncata</i>	09020204020058	0.33			--	0.1	
<i>Pteronarcys</i>	09020205023		1.67	0	SH		0.3
<i>Pteronarcys biloba</i>	09020205023061	1.67			--	0.3	
Perlodidae	09020207	0.67	0.67		--	0.1	0.1
<i>Isoperla</i>	09020207026	0.67	0.67	2	PR	0.1	0.1
<i>Perlesta</i>	09020209046	1.33	1.33	5	PR	0.3	0.3
Baetidae	09020401	0.67			--	0.1	
<i>Baetis</i>	09020401001		0.50	4	CG		0.1
<i>Baetis tricaudatus</i>	09020401001012	0.33			--	0.1	
<i>Plauditus</i>	09020401012	1.00	1.50		CG	0.2	0.3
<i>Maccaffertium</i>	09020402015	2.33	2.33	4	SC	0.5	0.5
<i>Paraleptophlebia</i>	09020406026	1.00	1.00	1	CG	0.2	0.2
<i>Eurylophella</i>	09020410036	0.33	0.33	3	CG	0.1	0.1
<i>Serratella</i>	09020410037		1.00	2	CG		0.2
<i>Serratella serratoides</i>	09020410037124	1.00			--	0.2	
<i>Tricorythodes</i>	09020411038	0.33	0.33	4	CG	0.1	0.1
<i>Caenis</i>	09020412040	0.33	0.33	7	CG	0.1	0.1
<i>Dolophilodes</i>	09020601001	2.00	2.00	0	CF	0.4	0.4
<i>Chimarra</i>	09020601003	0.33	0.33	2	CF	0.1	0.1
Hydropsychidae	09020604	1.67			--	0.3	
<i>Cheumatopsyche</i>	09020604015	1.00	1.01	5	CF	0.2	0.2
<i>Hydropsyche</i>	09020604016	77.33	216.99	4	CF	15.7	44.0
<i>Hydropsyche alhedra</i>	09020604016028	2.33			--	0.5	
<i>Hydropsyche bronta</i>	09020604016029	2.00			--	0.4	
<i>Hydropsyche morosa</i>	09020604016030	44.67			--	9.1	
<i>Hydropsyche sparna</i>	09020604016032	81.67			--	16.6	
<i>Hydropsyche depravata complex</i>	09020604016041	0.33			CF	0.1	
<i>Hydropsyche scalaris group</i>	09020604016048	7.00			--	1.4	
<i>Rhyacophila</i>	09020605019		16.33	2	PR		3.3
<i>Rhyacophila minor</i>	09020605019063	16.33			PR	3.3	
<i>Glossosoma</i>	09020606020	0.33	0.33	0	SC	0.1	0.1



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Calculated: 4/6/2009

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Oxyethira</i>	09020607028			3	P		
<i>Brachycentrus</i>	09020609043		65.00	0	CF		13.2
<i>Brachycentrus appalachia</i>	09020609043096	65.00			--	13.2	
<i>Lepidostoma</i>	09020611064	0.67	0.67	1	SH	0.1	0.1
<i>Nigronia</i>	09020701003		0.33	0	PR		0.1
<i>Nigronia serricornis</i>	09020701003003	0.33			--	0.1	
Chironomidae	09021011	1.67			--	0.3	
<i>Rheopelopia</i>	09021011017		10.82		PR		2.2
<i>Rheopelopia acra group</i>	09021011017036	10.67			--	2.2	
<i>Pagastia</i>	09021011025		0.34	1	--		0.1
<i>Pagastia orthogonia</i>	09021011025001	0.33			--	0.1	
<i>Brillia</i>	09021011033	0.67	0.68	5	SH	0.1	0.1
<i>Corynoneura</i>	09021011036	0.67	0.68	7	CG	0.1	0.1
<i>Cricotopus</i>	09021011037		0.68	7	SH		0.1
<i>Cricotopus bicinctus</i>	09021011037057	0.67			--	0.1	
<i>Eukiefferiella</i>	09021011041		1.35	8	CG		0.3
<i>Eukiefferiella claripennis group</i>	09021011041075	1.33			--	0.3	
<i>Parametriocnemus</i>	09021011053	1.67	1.69	5	CG	0.3	0.3
<i>Rheocricotopus</i>	09021011057	1.00	1.69	6	CG	0.2	0.3
<i>Rheocricotopus robacki</i>	09021011057105	0.67			--	0.1	
<i>Tvetenia</i>	09021011065		29.42	5	CG		6.0
<i>Tvetenia vitracies</i>	09021011065113	16.67			--	3.4	
<i>Tvetenia paucunca</i>	09021011065114	12.33			--	2.5	
<i>Micropsectra</i>	09021011070	26.67	27.05	7	CG	5.4	5.5
<i>Rheotanytarsus</i>	09021011072	24.00	24.35	6	CF	4.9	4.9
<i>Tanytarsus</i>	09021011076	9.33	9.47	6	CF	1.9	1.9
<i>Microtendipes</i>	09021011094		0.34	6	CF		0.1
<i>Microtendipes pedellus group</i>	09021011094166	0.33			--	0.1	
<i>Polypedilum</i>	09021011102		8.45	6	SH		1.7
<i>Polypedilum aviceps</i>	09021011102181	4.00			--	0.8	
<i>Polypedilum flavum</i>	09021011102182	3.00			--	0.6	
<i>Polypedilum illinoense group</i>	09021011102185	1.33			--	0.3	
<i>Simulium</i>	09021012047		44.67	4	CF		9.1
<i>Simulium fibrinflatum</i>	09021012047059	0.67			--	0.1	
<i>Simulium jenningsi</i>	09021012047060	0.33			--	0.1	
<i>Simulium tuberosum</i>	09021012047067	42.00			--	8.5	
<i>Simulium jenningsi complex</i>	09021012047070	1.67			CF	0.3	
<i>Atherix</i>	09021015055	0.33	0.33	2	PR	0.1	0.1



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		Actual	Adjusted			Actual	Adjusted
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.1	0.1
<i>Neoplasta</i>	09021016064	2.67	2.67		PR	0.5	0.5
<i>Neoporus</i>	09021103033	0.33	0.33		--	0.1	0.1
<i>Dineutus</i>	09021104032	0.67	0.67	2	--	0.1	0.1
<i>Optioservus</i>	09021113067		0.33	3	SC		0.1
<i>Optioservus trivittatus</i>	09021113067048	0.33			--	0.1	
<i>Oulimnius</i>	09021113068		0.33		--		0.1
<i>Oulimnius latiusculus</i>	09021113068049	0.33			--	0.1	
<i>Promoresia</i>	09021113069		8.00		--		1.6
<i>Promoresia tardella</i>	09021113069052	8.00			--	1.6	
<i>Stenelmis</i>	09021113070		1.00	5	SC		0.2
<i>Stenelmis crenata</i>	09021113070055	1.00			--	0.2	
<i>Torrenticola</i>	09030104001	0.33	0.33		--	0.1	0.1
<i>Lebertia</i>	09030105001	0.33	0.33		--	0.1	0.1