



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

Station Information

Station Number: S-357	DEP Drainage: Androscoggin
Waterbody: Bobbin Mill Brook - Station 357	HUC8 Name: Lower Androscoggin
Town: Auburn	Latitude: 44 7 13.51 N
Directions: ABOVE RIVER RD. CROSSING	Longitude: 70 12 54.65 W
	Stream Order: 2

Sample Information

Log Number: 2186	Type of Sample: ROCK BAG	Date Deployed: 7/9/2013
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/6/2013

Classification Attainment

Statutory Class: B	Final Determination: A	Date: 1/30/2014
Model Result with P>.6: A	Reason for Determination: Model	
Date Last Calculated: 1/28/2014	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.50	Class C	0.02
Class B	0.48	NA	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.84
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.16

Model Variables

01 Total Mean Abundance	373.33	18 Relative Abundance Ephemeroptera	0.20
02 Generic Richness	38.00	19 EPT Generic Richness	15.00
03 Plecoptera Mean Abundance	12.67	21 Sum of Abundances: <i>Dicrotendipes, Micropsectra, Parachironomus, Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	73.00	23 Relative Generic Richness- Plecoptera	0.08
05 Shannon-Wiener Generic Diversity	3.42	25 Sum of Abundances: <i>Cheumatopsyche, Cricotopus, Tanytarsus, Ablabesmyia</i>	47.99
06 Hilsenhoff Biotic Index	4.37	26 Sum of Abundances: <i>Acroneuria, Maccaffertium, Stenonema</i>	18.10
07 Relative Abundance - Chironomidae	0.24	28 EP Generic Richness/14	0.57
08 Relative Generic Richness Diptera	0.34	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	61.01		
11 <i>Cheumatopsyche</i> Abundance	46.99		
12 EPT Generic Richness/ Diptera	1.15		
Generic Richness			
13 Relative Abundance - Oligochaeta	0.02		
15 Perlidae Mean Abundance (Family Functional Group)	12.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	1.67		
17 Chironomini Abundance (Family Functional Group)	1.00		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	19.18
2	<i>Hydropsyche</i>	16.34
3	<i>Baetis</i>	15.89
4	<i>Simulium</i>	14.82
5	<i>Cheumatopsyche</i>	12.59



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT
 Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment		Waterbody Information - Retrieval	
Temperature:	24.1 deg C	Temperature:	23.2 deg C
Dissolved Oxygen:	8.3 mg/l	Dissolved Oxygen:	8.2 mg/l
Specific Conductance:	69 uS/cm	Specific Conductance:	74 uS/cm
Velocity:	87.6 cm/s	Velocity:	47.87 cm/s
pH:	6.67	pH:	6.77
Wetted Width:	13 m	Wetted Width:	15 m
Bankfull Width:	16 m	Bankfull Width:	16 m
Depth:	40 cm	Depth:	23 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Upland Conifer	Partly Open	Rolling	
Upland Hardwood			
Urban			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Urban Runoff	Above Confluence Lake Outlet	Boulder	5 %
		Gravel	20 %
		Rubble/Cobble	50 %
		Sand	20 %
		Silt	5 %

Landcover Summary - 2004 Data

Total Area (ac)	976	High Int. Dev. %	12.0	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	3.8	Wetland %	4.9	Tilled Agriculture %	6.3
		Low Int. Dev. %	4.5	Upland Woody %	45.8	Grassland %	10.5
		Development %	20.3	Natural %	50.7	Human Altered %	49.3
						Impervious %	20.1

Sample Comments



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Subsample Factor: X1

Replicates: 3

Calculated: 1/28/2014

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Prostoma</i>	04010101001	2.33	2.33		--	0.6	0.6
<i>Chaetogaster</i>	08020202002		0.33		--		0.1
<i>Chaetogaster diastrophus</i>	08020202002002	0.33			--	0.1	
<i>Nais</i>	08020202009		6.00		CG		1.6
<i>Nais behningi</i>	08020202009003	4.33			--	1.2	
<i>Nais communis</i>	08020202009005	1.67			--	0.4	
Perlodidae	09020207	0.33	0.33		--	0.1	0.1
Perlidae	09020209	3.67			--	1.0	
<i>Acroneuria</i>	09020209042	0.33	10.44	0	PR	0.1	2.8
<i>Acroneuria abnormis</i>	09020209042121	5.67		0	PR	1.5	
<i>Acroneuria lycorias</i>	09020209042125	1.33			--	0.4	
<i>Paragnetina</i>	09020209049		1.90	1	PR		0.5
<i>Paragnetina immarginata</i>	09020209049149	0.33			--	0.1	
<i>Paragnetina media</i>	09020209049151	1.00			--	0.3	
<i>Boyeria</i>	09020301004		5.67	2	PR		1.5
<i>Boyeria grafiana</i>	09020301004011	1.00			--	0.3	
<i>Boyeria vinosa</i>	09020301004012	4.67			--	1.3	
Baetidae	09020401	5.33	5.33		--	1.4	1.4
<i>Baetis</i>	09020401001	15.33	59.33	4	CG	4.1	15.9
<i>Baetis flavistriga</i>	09020401001004	10.00			--	2.7	
<i>Baetis pluto</i>	09020401001009	34.00			--	9.1	
Heptageniidae	09020402	0.33	0.33		--	0.1	0.1
<i>Maccaffertium</i>	09020402015	3.33	7.67	4	SC	0.9	2.1
<i>Maccaffertium mediopunctatum</i>	09020402015050	2.00			--	0.5	
<i>Maccaffertium modestum</i>	09020402015051	2.33			--	0.6	
<i>Serratella</i>	09020410037		0.33	2	CG		0.1
<i>Serratella serratoides</i>	09020410037124	0.33			--	0.1	
<i>Chimarra</i>	09020601003	7.33	9.67	2	CF	2.0	2.6
<i>Chimarra obscura</i>	09020601003003	2.33			--	0.6	
Hydropsychidae	09020604	5.33			--	1.4	
<i>Cheumatopsyche</i>	09020604015	44.67	46.99	5	CF	12.0	12.6
<i>Hydropsyche</i>	09020604016	20.67	61.01	4	CF	5.5	16.3
<i>Hydropsyche sparna</i>	09020604016032	32.33			--	8.7	
<i>Hydropsyche depravata complex</i>	09020604016041	5.00			CF	1.3	
<i>Glossosoma</i>	09020606020		0.33	0	SC		0.1
<i>Glossosoma nigrrior</i>	09020606020068	0.33			SC	0.1	
<i>Micrasema</i>	09020609044	0.33	0.67	2	SH	0.1	0.2
<i>Micrasema wataga</i>	09020609044101	0.33			--	0.1	



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		Actual	Adjusted			Actual	Adjusted
<i>Pycnopsyche</i>	09020610049	0.33	0.33	4	SH	0.1	0.1
<i>Lepidostoma</i>	09020611064	0.33	0.33	1	SH	0.1	0.1
Chironomidae	09021011	0.33			--	0.1	
<i>Ablabesmyia</i>	09021011001		0.33	8	PR		0.1
<i>Ablabesmyia mallochii</i>	09021011001004	0.33			--	0.1	
<i>Nilotanytus</i>	09021011012		1.34	6	PR		0.4
<i>Nilotanytus fimbriatus</i>	09021011012027	1.33			--	0.4	
<i>Potthastia</i>	09021011026		0.33	2	CG		0.1
<i>Potthastia longimana</i>	09021011026046	0.33			--	0.1	
<i>Corynoneura</i>	09021011036	1.67	1.67	7	CG	0.4	0.4
<i>Cricotopus</i>	09021011037		0.67	7	SH		0.2
<i>Cricotopus patens</i>	09021011037075	0.67			--	0.2	
<i>Nanocladius</i>	09021011049		1.67	3	CG		0.4
<i>Nanocladius distinctus</i>	09021011049087	0.33			--	0.1	
<i>Nanocladius spiniplenus</i>	09021011049090	1.33			--	0.4	
<i>Thienemanniella</i>	09021011062		0.33	6	CG		0.1
<i>Thienemanniella xena</i>	09021011062110	0.33			--	0.1	
<i>Tvetenia</i>	09021011065		12.04	5	CG		3.2
<i>Tvetenia paucunca</i>	09021011065114	12.00			--	3.2	
<i>Rheotanytarsus</i>	09021011072	71.33	71.60	6	CF	19.1	19.2
<i>Polypedilum</i>	09021011102		1.00	6	SH		0.3
<i>Polypedilum aviceps</i>	09021011102181	0.33			--	0.1	
<i>Polypedilum flavum</i>	09021011102182	0.33			--	0.1	
<i>Polypedilum illinoense group</i>	09021011102185	0.33			--	0.1	
Simuliidae	09021012	0.33	0.33		--	0.1	0.1
<i>Simulium</i>	09021012047	0.67	55.33	4	CF	0.2	14.8
<i>Simulium fibrinflatum</i>	09021012047059	7.00			--	1.9	
<i>Simulium jenningsi</i>	09021012047060	0.67			--	0.2	
<i>Simulium jenningsi complex</i>	09021012047070	43.00			CF	11.5	
<i>Simulium venustum/verecundum complex</i>	09021012047072	4.00			CF	1.1	
<i>Hemerodromia</i>	09021016057	1.33	1.33	3	PR	0.4	0.4
Hydrophilidae	09021105				--		
<i>Macronychus</i>	09021113065		2.00	4	--		0.5
<i>Macronychus glabratus</i>	09021113065040	2.00			--	0.5	
<i>Microcyloepus</i>	09021113066	0.33	0.33	3	--	0.1	0.1
<i>Promoresia</i>	09021113069		0.33		--		0.1
<i>Promoresia elegans</i>	09021113069051	0.33			--	0.1	



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<i>Stenelmis</i>	09021113070	0.33	0.33	5	SC	0.1	0.1
<i>Ferrissia</i>	10010204035		2.67		SC		0.7
<i>Ferrissia rivularis</i>	10010204035066	2.67			--	0.7	
Sphaeriidae	10020201	0.33	0.33		CF	0.1	0.1