



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

Station Information

Station Number: S-343	DEP Drainage: Androscoggin
Waterbody: Aunt Hannah Brook - Station 343	HUC8: 01040002
Town: Dixfield	HUC8 Name: Lower Androscoggin
Directions: 15 M BELOW RT. 142 CROSSING	Latitude: 44 33 32.02 N
	Longitude: 70 27 7.63 W
	Stream Order: 2

Sample Information

Log Number: 1751	Type of Sample: ROCK BAG	Date Deployed: 7/25/2008
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/22/2008

Classification Attainment

Statutory Class: B	Final Determination: A	Date: 5/20/2009
Model Result with P>.6: A	Reason for Determination: Model	
Date Last Calculated: 5/19/2009	Comments:	

Model Probabilities

<u>First Stage Model</u>				<u>C or Better Model</u>	
Class A	0.93	Class C	0.00	Class A, B, or C	1.00
Class B	0.07	NA	0.00	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	331.67	18 Relative Abundance Ephemeroptera	0.13
02 Generic Richness	70.00	19 EPT Generic Richness	30.00
03 Plecoptera Mean Abundance	27.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	26.25
04 Ephemeroptera Mean Abundance	44.67	23 Relative Generic Richness- Plecoptera	0.13
05 Shannon-Wiener Generic Diversity	4.95	25 Sum of Abundances: <i>Cheumatopsyche</i> <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	23.67
06 Hilsenhoff Biotic Index	4.02	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	6.33
07 Relative Abundance - Chironomidae	0.34	28 EP Generic Richness/14	1.36
08 Relative Generic Richness Diptera	0.41	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	40.91		
11 <i>Cheumatopsyche</i> Abundance	18.93		
12 EPT Generic Richness/ Diptera Generic Richness	1.03		
13 Relative Abundance - Oligochaeta	0.10		
15 Perlidae Mean Abundance (Family Functional Group)	2.33		
16 Tanypodinae Mean Abundance (Family Functional Group)	12.39		
17 Chironomini Abundance (Family Functional Group)	16.40		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Hydropsyche</i>	12.33
2	<i>Stylodrilus</i>	9.15
3	<i>Micropsectra</i>	7.91
4	<i>Cheumatopsyche</i>	5.71
5	<i>Habrophlebia</i>	5.31



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Date Retrieved: 8/22/2008

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL WINNELL

Waterbody Information - Deployment

Temperature: 17.1 deg C
Dissolved Oxygen: 8.9 mg/l
Specific Conductance: 13 uS/cm
Velocity: 73 cm/s
pH: 5.85
Wetted Width: 9.3 m
Bankfull Width: 9.3 m
Depth: 60 cm

Waterbody Information - Retrieval

Temperature: 14.9 deg C
Dissolved Oxygen: 10.4 mg/l
Specific Conductance: 31 uS/cm
Velocity: 30 cm/s
pH: 6.68
Wetted Width: 7.6 m
Bankfull Width: 9 m
Depth: 22 cm

Water Chemistry - Retrieval

Summary of Habitat Characteristics

Landuse Name

Canopy Cover

Terrain

Pasture
Swamp Hardwood
Upland Hardwood

Canopy Dense
Hilly Terrain

Stressor

Location

Substrate

Below Road Crossing
Main Stem

Boulder 10 %
Gravel 30 %
Rubble/Cobble 40 %
Sand 20 %

Landcover Summary - 2004 Data

Sample Comments

7/25/08: VERY HIGH WATER



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Replicates: 3

Calculated: 5/19/2009

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		--	0.2	0.2
<i>Stylodrilus</i>	08020203011		30.33		--		9.1
<i>Stylodrilus heringianus</i>	08020203011001	30.33			--	9.1	
Lumbricidae	08020205	0.67	0.67		--	0.2	0.2
<i>Paracapnia</i>	09020203018	3.33	3.33	1	SH	1.0	1.0
<i>Leuctra</i>	09020204020	9.00	10.33	0	SH	2.7	3.1
<i>Leuctra ferruginea</i>	09020204020050	0.67			--	0.2	
<i>Leuctra truncata</i>	09020204020058	0.67			--	0.2	
<i>Pteronarcys</i>	09020205023		0.33	0	SH		0.1
<i>Pteronarcys biloba</i>	09020205023061	0.33			--	0.1	
<i>Tallaperla</i>	09020206025	1.00	1.00		SH	0.3	0.3
Perlodidae	09020207	6.00			--	1.8	
<i>Isoperla</i>	09020207026	0.67	4.67	2	PR	0.2	1.4
<i>Diura</i>	09020207030	0.33	2.33		PR	0.1	0.7
<i>Sweltsa</i>	09020208040	2.67	2.67		PR	0.8	0.8
<i>Acroneuria</i>	09020209042	1.00	1.67	0	PR	0.3	0.5
<i>Acroneuria abnormis</i>	09020209042121	0.67		0	PR	0.2	
<i>Agnatina</i>	09020209050		0.67	2	PR		0.2
<i>Agnatina capitata</i>	09020209050152	0.67		2	PR	0.2	
<i>Boyeria</i>	09020301004		0.33	2	PR		0.1
<i>Boyeria grafiana</i>	09020301004011	0.33			--	0.1	
Gomphidae	09020302	0.33	0.33		--	0.1	0.1
<i>Baetis</i>	09020401001		0.33	4	CG		0.1
<i>Baetis tricaudatus</i>	09020401001012	0.33			--	0.1	
<i>Pseudocloeon</i>	09020401006		0.33	4	SC		0.1
<i>Pseudocloeon frondale</i>	09020401006029	0.33			--	0.1	
<i>Acerpenna</i>	09020401007		0.33	5	CG		0.1
<i>Acerpenna macdunnoughi</i>	09020401007001	0.33			--	0.1	
<i>Diphetor</i>	09020401013		0.33		--		0.1
<i>Diphetor hageni</i>	09020401013001	0.33			--	0.1	
<i>Maccaffertium</i>	09020402015	3.67	4.67	4	SC	1.1	1.4
<i>Maccaffertium modestum</i>	09020402015051	1.00			--	0.3	
Leptophlebiidae	09020406	24.00			--	7.2	
<i>Habrophlebia</i>	09020406023	2.33	17.61		--	0.7	5.3
<i>Paraleptophlebia</i>	09020406026	1.33	10.06	1	CG	0.4	3.0
<i>Hexagenia</i>	09020407028	2.00	2.00	6	CG	0.6	0.6
Ephemerellidae	09020410	0.33			--	0.1	
<i>Ephemerella</i>	09020410035	2.67	2.77	1	CG	0.8	0.8



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Replicates: 3

Calculated: 5/19/2009

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Eurylophella</i>	09020410036		6.23	3	CG		1.9
<i>Eurylophella funeralis</i>	09020410036115	6.00			SH	1.8	
<i>Chimarra</i>	09020601003	1.00	1.00	2	CF	0.3	0.3
<i>Polycentropus</i>	09020603010	4.00	4.00	6	PR	1.2	1.2
Hydropsychidae	09020604	1.00			--	0.3	
<i>Diplectrona</i>	09020604014		11.16	0	CF		3.4
<i>Diplectrona modesta</i>	09020604014025	11.00			--	3.3	
<i>Cheumatopsyche</i>	09020604015	18.67	18.93	5	CF	5.6	5.7
<i>Hydropsyche</i>	09020604016	37.67	40.91	4	CF	11.3	12.3
<i>Hydropsyche sparna</i>	09020604016032	2.33			--	0.7	
<i>Hydropsyche ventura</i>	09020604016033	0.33			--	0.1	
<i>Rhyacophila</i>	09020605019		7.00	2	PR		2.1
<i>Rhyacophila acutiloba</i>	09020605019056	3.00			PR	0.9	
<i>Rhyacophila minor</i>	09020605019063	4.00			PR	1.2	
<i>Protoptila</i>	09020606022	0.33	0.33	1	SC	0.1	0.1
Limnephilidae	09020610				--		
<i>Pycnopsyche</i>	09020610049	0.33	0.33	4	SH	0.1	0.1
<i>Lepidostoma</i>	09020611064	12.33	12.33	1	SH	3.7	3.7
<i>Psilotreta</i>	09020614068		0.33	0	SC		0.1
<i>Psilotreta frontalis</i>	09020614068134	0.33			--	0.1	
<i>Goera</i>	09020620063	0.33	0.33	0	SC	0.1	0.1
<i>Nigronia</i>	09020701003		2.67	0	PR		0.8
<i>Nigronia serricornis</i>	09020701003003	2.67			--	0.8	
<i>Sialis</i>	09020702004	0.33	0.33	4	PR	0.1	0.1
Lepidoptera	090209	0.33	0.33		--	0.1	0.1
<i>Dicranota</i>	09021001005	1.00	1.00	3	PR	0.3	0.3
<i>Bezzia/palpomyia</i>	09021010043	7.00	7.00	6	PR	2.1	2.1
Chironomidae	09021011	9.67			--	2.9	
<i>Nilotanytus</i>	09021011012		3.28	6	PR		1.0
<i>Nilotanytus fimbriatus</i>	09021011012027	3.00			--	0.9	
<i>Paramerina</i>	09021011013	1.33	1.46		--	0.4	0.4
<i>Rheopelopia</i>	09021011017		1.82		PR		0.5
<i>Rheopelopia acra group</i>	09021011017036	1.67			--	0.5	
<i>Trissopelopia</i>	09021011021		5.83		PR		1.8
<i>Trissopelopia ogemawi</i>	09021011021042	5.33			--	1.6	
<i>Pagastia</i>	09021011025		1.09	1	--		0.3
<i>Pagastia orthogonia</i>	09021011025001	1.00			--	0.3	
<i>Cardiocladius</i>	09021011034		1.09	5	PR		0.3



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		Actual	Adjusted			Actual	Adjusted
<i>Cardiocladius obscurus</i>	09021011034053	1.00			--	0.3	
<i>Corynoneura</i>	09021011036	2.33	2.55	7	CG	0.7	0.8
<i>Cricotopus</i>	09021011037		1.46	7	SH		0.4
<i>Cricotopus triannulatus/infuscatus</i>	09021011037078	1.33			SH	0.4	
<i>Eukiefferiella</i>	09021011041		0.36	8	CG		0.1
<i>Eukiefferiella brehmi group</i>	09021011041073	0.33			--	0.1	
<i>Nanocladius</i>	09021011049		2.19	3	CG		0.7
<i>Nanocladius branchicolus</i>	09021011049091	0.67			--	0.2	
<i>Nanocladius sp. 5 epler</i>	09021011049094	1.33			--	0.4	
<i>Orthocladius</i>	09021011050		0.36	6	CG		0.1
<i>Symposiocladius lignicola</i>	09021011050100	0.33			--	0.1	
<i>Orthocladius lignicola</i>	09021011050100	0.33			--	0.1	
<i>Parachaetocladius</i>	09021011051	3.33	3.65		CG	1.0	1.1
<i>Parametriocnemus</i>	09021011053	11.00	12.76	5	CG	3.3	3.8
<i>Parametriocnemus sp. f epler</i>	09021011053101	0.67			--	0.2	
<i>Rheocricotopus</i>	09021011057		2.19	6	CG		0.7
<i>Rheocricotopus robacki</i>	09021011057105	0.33			--	0.1	
<i>Rheocricotopus eminellobus</i>	09021011057109	1.67			--	0.5	
<i>Thienemanniella</i>	09021011062		3.65	6	CG		1.1
<i>Thienemanniella xena</i>	09021011062110	3.33			--	1.0	
<i>Tvetenia</i>	09021011065		3.65	5	CG		1.1
<i>Tvetenia paucunca</i>	09021011065114	3.33			--	1.0	
<i>Micropsectra</i>	09021011070	24.00	26.25	7	CG	7.2	7.9
<i>Rheotanytarsus</i>	09021011072	14.00	15.31	6	CF	4.2	4.6
<i>Stempellina</i>	09021011073	0.33	0.36	2	CG	0.1	0.1
<i>Stempellinella</i>	09021011074		0.73	2	--		0.2
<i>Stempellinella sp. a epler</i>	09021011074002	0.67			--	0.2	
<i>Tanytarsus</i>	09021011076	3.00	3.28	6	CF	0.9	1.0
<i>Polypedilum</i>	09021011102		16.40	6	SH		4.9
<i>Polypedilum aviceps</i>	09021011102181	6.67			--	2.0	
<i>Polypedilum laetum</i>	09021011102186	3.33			--	1.0	
<i>Polypedilum tritum</i>	09021011102191	5.00			--	1.5	
<i>Rheosmittia</i>	09021011122	1.67	1.82		--	0.5	0.5
<i>Heleniella</i>	09021011126	1.33	1.46		--	0.4	0.4
<i>Simulium</i>	09021012047		0.33	4	CF		0.1
<i>Simulium tuberosum</i>	09021012047067	0.33			--	0.1	
<i>Hemerodromia</i>	09021016057	0.33	0.33	3	PR	0.1	0.1
<i>Roederiodes</i>	09021016058	1.67	1.67	3	PR	0.5	0.5



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		Actual	Adjusted			Actual	Adjusted
<i>Oulimnius</i>	09021113068		0.33		--		0.1
<i>Oulimnius latiusculus</i>	09021113068049	0.33			--	0.1	
<i>Promoresia</i>	09021113069		3.33		--		1.0
<i>Promoresia tardella</i>	09021113069052	3.33			--	1.0	
<i>Pisidium</i>	10020201002	0.67	0.67		CF	0.2	0.2