



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

Station Information

Station Number: S-872	River Basin:	Androscoggin
Waterbody: West Branch Ellis River - Station 872	HUC8 Name:	Lower Androscoggin
Town: Andover	Latitude:	44 38 8.07 N
Directions: 215 M DOWNSTREAM OF ROUTE 120 BRIDGE	Longitude:	70 44 25.8 W
	Stream Order:	4

Sample Information

Log Number: 2679	Type of Sample: ROCK BAG	Date Deployed: 8/1/2018
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/27/2018

Classification Attainment

Statutory Class: A	Final Determination: A	Date: 3/11/2019
Model Result with $P \geq 0.6$: A	Reason for Determination: Model	
Date Last Calculated: 3/8/2019	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.72	Class A, B, or C	1.00
Class B	0.28	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	1.00	Class A	0.94
Class C or Non-Attainment	0.00	Class B or C or Non-Attainment	0.06

Model Variables

01 Total Mean Abundance	1162.67	18 Relative Abundance Ephemeroptera	0.47
02 Generic Richness	48.00	19 EPT Generic Richness	19.00
03 Plecoptera Mean Abundance	46.67	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	14.12
04 Ephemeroptera Mean Abundance	548.00	23 Relative Generic Richness- Plecoptera	0.02
05 Shannon-Wiener Generic Diversity	3.63	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	160.94
06 Hilsenhoff Biotic Index	3.42	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	12.00
07 Relative Abundance - Chironomidae	0.43	28 EP Generic Richness/14	0.79
08 Relative Generic Richness Diptera	0.48	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	2.67		
11 <i>Cheumatopsyche</i> Abundance	0.00		
12 EPT Generic Richness/ Diptera Generic Richness	0.83		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	0.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	83.29		
17 Chironomini Abundance (Family Functional Group)	105.88		

Five Most Dominant Taxa		
Rank	Taxon Name	Percent
1	<i>Paraleptophlebia</i>	42.20
2	<i>Tanytarsus</i>	9.96
3	<i>Microtendipes</i>	5.22
4	<i>Orthocladius</i>	4.98
5	<i>Isoperla</i>	4.01



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Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature:	18 deg C
Dissolved Oxygen:	10 mg/l
Dissolved Oxygen Saturation:	105.8 %
Specific Conductance:	40 uS/cm
Velocity:	12.2 cm/s
pH:	6.5
Wetted Width:	18 m
Bankfull Width:	23 m
Depth:	57 cm

Waterbody Information - Retrieval

Temperature:	17.9 deg C
Dissolved Oxygen:	10.02 mg/l
Dissolved Oxygen Saturation:	105.9 %
Specific Conductance:	45 uS/cm
Velocity:	6.1 cm/s
pH:	7.1
Wetted Width:	17 m
Bankfull Width:	23 m
Depth:	52 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Pasture	Open	Hilly
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Nps Pollution	Below Road Crossing	Gravel 30 %
		Rubble/Cobble 30 %
		Sand 40 %

Landcover Summary - 2004 Data

Total Area (ac)	33019	High Int. Dev. %	0.0	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	0.1	Wetland %	1.5	Tilled Agriculture %	0.3
		Low Int. Dev. %	0.6	Upland Woody %	96.2	Grassland %	1.0
		Development %	0.7	Natural %	97.8	Human Altered %	2.1
						Impervious %	0.6

Sample Comments

TRAIL CROSSING UPSTREAM

Trail crossing upstream, dead & live fish, horse path, some erosion.



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Subsample Factor: X4

Replicates: 3

Calculated: 3/8/2019

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Nais</i>	08020202009	1.33	1.33		CG	0.1	0.1
<i>Isoperla</i>	09020207026	46.67	46.67	2	PR	4.0	4.0
<i>Boyeria</i>	09020301004		1.33	2	PR		0.1
<i>Boyeria vinosa</i>	09020301004012	1.33			--	0.1	
<i>Centropetium</i>	09020401003	4.00	4.00	2	CG	0.3	0.3
<i>Acerpenna</i>	09020401007		1.33	5	CG		0.1
<i>Acerpenna macdunnoughi</i>	09020401007001	1.33			--	0.1	
<i>Procladius</i>	09020401010	1.33	1.33		CG	0.1	0.1
<i>Stenacron</i>	09020402014	2.67	2.67	7	SC	0.2	0.2
<i>Maccaffertium</i>	09020402015	4.00	12.00	4	SC	0.3	1.0
<i>Maccaffertium vicarium</i>	09020402015055	8.00			--	0.7	
<i>Habrophlebia</i>	09020406023		1.33		--		0.1
<i>Habrophlebia vibrans</i>	09020406023072	1.33			--	0.1	
<i>Paraleptophlebia</i>	09020406026	490.67	490.67	1	CG	42.2	42.2
<i>Ephemerella</i>	09020410035		16.00	1	CG		1.4
<i>Ephemerella subvaria</i>	09020410035111	16.00			--	1.4	
<i>Eurylophella</i>	09020410036	9.33	10.67	3	CG	0.8	0.9
<i>Eurylophella funeralis</i>	09020410036115	1.33			SH	0.1	
<i>Tricorythodes</i>	09020411038	8.00	8.00	4	CG	0.7	0.7
Polycentropodidae	09020603	2.67	2.67		--	0.2	0.2
<i>Polycentropus</i>	09020603010	16.00	16.00	6	PR	1.4	1.4
<i>Hydropsyche</i>	09020604016	2.67	2.67	4	CF	0.2	0.2
<i>Rhyacophila</i>	09020605019		1.33	2	PR		0.1
<i>Rhyacophila minora</i>	09020605019063	1.33			PR	0.1	
<i>Oxyethira</i>	09020607028	2.67	2.67	3	P	0.2	0.2
<i>Brachycentrus</i>	09020609043		6.67	0	CF		0.6
<i>Brachycentrus appalachia</i>	09020609043096	6.67			--	0.6	
Limnephilidae	09020610				--		
Leptoceridae	09020618	1.33	1.33		--	0.1	0.1
<i>Mystacides</i>	09020618075		4.00	4	CG		0.3
<i>Mystacides sepulchralis</i>	09020618075147	4.00			--	0.3	
<i>Nigronia</i>	09020701003		1.33	0	PR		0.1
<i>Nigronia serricornis</i>	09020701003003	1.33			--	0.1	
<i>Hexatoma</i>	09021001008	2.67	2.67	2	PR	0.2	0.2
<i>Bezzia/palpomyia</i>	09021010043	12.00	12.00	6	PR	1.0	1.0
Chironomidae	09021011	28.00			--	2.4	
<i>Ablabesmyia</i>	09021011001	8.00	8.47	8	PR	0.7	0.7



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<i>Labrundinia</i>	09021011008		15.53	7	PR		1.3
<i>Labrundinia pilosella</i>	09021011008022	14.67			--	1.3	
<i>Rheopelopia</i>	09021011017				PR		
<i>Thienemannimyia</i>	09021011020		45.18	3	PR		3.9
<i>Thienemannimyia group</i>	09021011020041	42.67			--	3.7	
<i>Zavreliomyia</i>	09021011022	13.33	14.12	8	PR	1.1	1.2
<i>Corynoneura</i>	09021011036	10.67	11.29	7	CG	0.9	1.0
<i>Cricotopus</i>	09021011037		36.71	7	SH		3.2
<i>Cricotopus bicinctus</i>	09021011037057	34.67			--	3.0	
<i>Nanocladius</i>	09021011049	6.67	7.06	3	CG	0.6	0.6
<i>Orthocladius</i>	09021011050		57.88	6	CG		5.0
<i>Orthocladius annectens</i>	09021011050092	54.67			--	4.7	
<i>Psectrocladius</i>	09021011056	10.67	11.29	8	CG	0.9	1.0
<i>Rheocricotopus</i>	09021011057	5.33	5.65	6	CG	0.5	0.5
<i>Thienemanniella</i>	09021011062	10.67	11.29	6	CG	0.9	1.0
<i>Micropsectra</i>	09021011070	10.67	11.29	7	CG	0.9	1.0
<i>Rheotanytarsus</i>	09021011072	2.67	26.82	6	CF	0.2	2.3
<i>Rheotanytarsus exiguus group</i>	09021011072127	18.67			CF	1.6	
<i>Rheotanytarsus pellucidus</i>	09021011072128	4.00			CF	0.3	
<i>Stempellinella</i>	09021011074	18.67	19.76	2	--	1.6	1.7
<i>Tanytarsus</i>	09021011076	109.33	115.76	6	CF	9.4	10.0
<i>Pseudochironomus</i>	09021011078	5.33	5.65	5	CG	0.5	0.5
<i>Dicrotendipes</i>	09021011085	2.67	2.82	8	CG	0.2	0.2
<i>Microtendipes</i>	09021011094		60.71	6	CF		5.2
<i>Microtendipes pedellus group</i>	09021011094166	56.00			--	4.8	
<i>Microtendipes rydalensis group</i>	09021011094168	1.33			--	0.1	
<i>Paratendipes</i>	09021011100	2.67	2.82	8	CG	0.2	0.2
<i>Phaenopsectra</i>	09021011101	13.33	14.12	7	SC	1.1	1.2
<i>Polypedilum</i>	09021011102		19.76	6	SH		1.7
<i>Polypedilum aviceps</i>	09021011102181	1.33			--	0.1	
<i>Polypedilum laetum</i>	09021011102186	1.33			--	0.1	
<i>Polypedilum halterale group</i>	09021011102193	16.00			--	1.4	
Empididae	09021016			6	--		
<i>Dubiraphia</i>	09021113064	4.00	4.00	6	--	0.3	0.3
<i>Promoresia</i>	09021113069		1.33		--		0.1
<i>Promoresia tardella</i>	09021113069052	1.33			--	0.1	
Gastropoda	1001	1.33	1.33		--	0.1	0.1
Physidae	10010202	1.33	1.33		SC	0.1	0.1