



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

Station Information

Station Number: S-356	River Basin: Androscoggin
Waterbody: Stetson Brook - Station 356	HUC8 Name: Lower Androscoggin
Town: Lewiston	Latitude: 44 7 41.68 N
Directions: 65 M BELOW STETSON RD. CROSSING	Longitude: 70 10 56.56 W
	Stream Order: 1

Sample Information

Log Number: 2676	Type of Sample: ROCK BAG	Date Deployed: 7/26/2018
Subsample Factor: X1	Replicates: 3	Date Retrieved: 8/23/2018

Classification Attainment

Statutory Class: B	Final Determination: A	Date: 2/21/2019
Model Result with P \geq 0.6: A	Reason for Determination: Model	
Date Last Calculated: 2/19/2019	Comments:	

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.51	Class C	0.07
Class B	0.42	NA	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.97	Class A	0.84
Class C or Non-Attainment	0.03	Class B or C or Non-Attainment	0.16

Model Variables

01 Total Mean Abundance	114.00	18 Relative Abundance Ephemeroptera	0.09
02 Generic Richness	39.00	19 EPT Generic Richness	12.00
03 Plecoptera Mean Abundance	2.67	21 Sum of Abundances: <i>Dicrotendipes, Micropsectra, Parachironomus, Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	10.00	23 Relative Generic Richness- Plecoptera	0.03
05 Shannon-Wiener Generic Diversity	4.09	25 Sum of Abundances: <i>Cheumatopsyche, Cricotopus, Tanytarsus, Ablabesmyia</i>	9.37
06 Hilsenhoff Biotic Index	4.95	26 Sum of Abundances: <i>Acroneuria, Maccaffertium, Stenonema</i>	8.00
07 Relative Abundance - Chironomidae	0.55	28 EP Generic Richness/14	0.36
08 Relative Generic Richness Diptera	0.36	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	1.67		
11 <i>Cheumatopsyche</i> Abundance	2.67		
12 EPT Generic Richness/ Diptera Generic Richness	0.86		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	2.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	4.02		
17 Chironomini Abundance (Family Functional Group)	8.04		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Rheotanytarsus</i>	30.57
2	<i>Paratanytarsus</i>	8.23
3	<i>Polypedilum</i>	6.17
4	<i>Promoresia</i>	6.14
5	<i>Psephenus</i>	5.26



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Log Number: 2676

Town: Lewiston
Waterbody: Stetson Brook - Station 356

Date Deployed: 7/26/2018
Date Retrieved: 8/23/2018

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT

Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 21.8 deg C
Dissolved Oxygen: 8.99 mg/l
Dissolved Oxygen Saturation: 101.9 %
Specific Conductance: 190.4 uS/cm
Velocity: 33.5 cm/s
pH: 7.5
Wetted Width: 3 m
Bankfull Width: 3 m
Depth: 24 cm

Waterbody Information - Retrieval

Temperature: 17.6 deg C
Dissolved Oxygen: 10.1 mg/l
Dissolved Oxygen Saturation: 105.2 %
Specific Conductance: 157.5 uS/cm
Velocity: 24.4 cm/s
pH: 7.44
Wetted Width: 2 m
Bankfull Width: 3 m
Depth: 16 cm

Water Chemistry - 6/25/2018

Nitrate + Nitrite As Nitrogen	0.18 mg/l	Orthophosphate As Phosphorus	6 ug/l
Total Alkalinity	31 mg/l	Total Kjeldahl Nitrogen (organic A	0.4 mg/l
Total Phosphorus Mixed Forms (po	46 ug/l		

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Swamp Hardwood	Partly Open	Rolling	
Upland Conifer			
Upland Hardwood			
Urban			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Urban Runoff	Below Road Crossing	Boulder	10 %
		Gravel	20 %
		Rubble/Cobble	50 %
		Sand	15 %
		Silt	5 %

Landcover Summary - 2004 Data

Total Area (ac)	1554	High Int. Dev. %	0.3	Water %	0.0	Non-vegetated %	0.0
		Med Int. Dev. %	0.4	Wetland %	4.5	Tilled Agriculture %	4.9
		Low Int. Dev. %	4.0	Upland Woody %	67.7	Grassland %	16.6
		Development %	4.8	Natural %	72.3	Human Altered %	27.7
						Impervious %	4.6
Total Land (ac)	1554	High Int. Dev. %	0.3	Water %	N/A	Non-vegetated %	N/A
		Med Int. Dev. %	0.4	Wetland %	4.5	Tilled Agriculture %	4.9
		Low Int. Dev. %	4.0	Upland Woody %	67.7	Grassland %	16.6
		Development %	4.8	Natural %	72.3	Human Altered %	27.7
						Impervious %	4.6

Sample Comments

Crayfish, fish.



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

Station Number: S-356 Waterbody: Stetson Brook - Station 356 Town: Lewiston
Log Number: 2676 Subsample Factor: X1 Replicates: 3 Calculated: 2/19/2019

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Prostoma</i>	04010101001	1.00	1.00		--	0.9	0.9
<i>Acroneuria</i>	09020209042		2.67	0	PR		2.3
<i>Acroneuria lycorias</i>	09020209042125	2.67			--	2.3	
<i>Boyeria</i>	09020301004	0.33	2.00	2	PR	0.3	1.8
<i>Boyeria vinosa</i>	09020301004012	1.67			--	1.5	
Calopterygidae	09020307	0.33	0.33		--	0.3	0.3
<i>Calopteryx</i>	09020307043	0.33	0.33	5	PR	0.3	0.3
<i>Leucrocota</i>	09020402011	1.00	1.00	1	SC	0.9	0.9
<i>Maccaffertium</i>	09020402015	4.67	5.33	4	SC	4.1	4.7
<i>Maccaffertium vicarium</i>	09020402015055	0.67			--	0.6	
<i>Eurylophella</i>	09020410036	3.00	3.00	3	CG	2.6	2.6
<i>Serratella</i>	09020410037		0.67	2	CG		0.6
<i>Teloganopsis deficiens</i>	09020410041001	0.67			--	0.6	
Polycentropodidae	09020603				--		
<i>Polycentropus</i>	09020603010	2.33	2.33	6	PR	2.0	2.0
<i>Cheumatopsyche</i>	09020604015	2.67	2.67	5	CF	2.3	2.3
<i>Hydropsyche</i>	09020604016	0.33	1.67	4	CF	0.3	1.5
<i>Hydropsyche slossonae</i>	09020604016031	0.33			--	0.3	
<i>Hydropsyche sparna</i>	09020604016032	0.33			--	0.3	
<i>Hydropsyche betteni</i>	09020604016037	0.67			--	0.6	
<i>Hydroptila</i>	09020607026	0.33	0.33	6	P	0.3	0.3
Limnephilidae	09020610	0.33	0.33		--	0.3	0.3
<i>Pycnopsyche</i>	09020610049	2.00	2.00	4	SH	1.8	1.8
<i>Helicopsyche</i>	09020616070	0.33	0.33	3	SC	0.3	0.3
<i>Nigronia</i>	09020701003		1.67	0	PR		1.5
<i>Nigronia serricornis</i>	09020701003003	1.67			--	1.5	
<i>Tipula</i>	09021001002	0.33	0.33	4	SH	0.3	0.3
Chironomidae	09021011	0.33			--	0.3	
<i>Ablabesmyia</i>	09021011001	2.00	2.01	8	PR	1.8	1.8
<i>Thienemannimyia</i>	09021011020		2.01	3	PR		1.8
<i>Thienemannimyia group</i>	09021011020041	2.00			--	1.8	
<i>Corynoneura</i>	09021011036			7	CG		
<i>Cricotopus</i>	09021011037	0.67	2.35	7	SH	0.6	2.1
<i>Cricotopus bicinctus</i>	09021011037057	1.67			--	1.5	
<i>Nanocladius</i>	09021011049	0.67	0.67	3	CG	0.6	0.6
<i>Orthocladius</i>	09021011050	1.33	1.34	6	CG	1.2	1.2
<i>Paratanytarsus</i>	09021011071	9.33	9.38	6	--	8.2	8.2



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		Actual	Adjusted			Actual	Adjusted
<i>Rheotanytarsus</i>	09021011072		34.85	6	CF		30.6
<i>Rheotanytarsus exiguus group</i>	09021011072127	27.67			CF	24.3	
<i>Rheotanytarsus pellucidus</i>	09021011072128	7.00			CF	6.1	
<i>Tanytarsus</i>	09021011076	2.33	2.35	6	CF	2.0	2.1
<i>Microtendipes</i>	09021011094		0.67	6	CF		0.6
<i>Microtendipes rydalensis group</i>	09021011094168	0.67			--	0.6	
<i>Phaenopsectra</i>	09021011101	0.33	0.34	7	SC	0.3	0.3
<i>Polypedilum</i>	09021011102		7.04	6	SH		6.2
<i>Polypedilum aviceps</i>	09021011102181	4.00			--	3.5	
<i>Polypedilum illinoense group</i>	09021011102185	2.67			--	2.3	
<i>Polypedilum tritum</i>	09021011102191	0.33			--	0.3	
<i>Simulium</i>	09021012047	2.33	2.33	4	CF	2.0	2.0
<i>Hemerodromia</i>	09021016057	2.00	2.00	3	PR	1.8	1.8
<i>Psephenus</i>	09021108058		6.00	4	SC		5.3
<i>Psephenus herricki</i>	09021108058028	6.00			--	5.3	
<i>Ectopria</i>	09021109059		0.33	5	SC		0.3
<i>Ectopria nervosa</i>	09021109059029	0.33			--	0.3	
<i>Microcyloopus</i>	09021113066		3.33	3	--		2.9
<i>Microcyloopus pusillus</i>	09021113066041	3.33			--	2.9	
<i>Optioservus</i>	09021113067	0.33	0.33	3	SC	0.3	0.3
<i>Optioservus tardella</i>	09021113067052	7.00			--	6.1	
<i>Promoesia</i>	09021113069		7.00		--		6.1
<i>Stenelmis</i>	09021113070	0.67	0.67	5	SC	0.6	0.6
<i>Ferrissia</i>	10010204035		0.33		SC		0.3
<i>Ferrissia rivularis</i>	10010204035066	0.33			--	0.3	
Sphaeriidae	10020201	0.67	0.67		CF	0.6	0.6