



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

**Station Information**

<b>Station Number:</b> S-137	River Basin: Androscoggin
Waterbody: Rangeley River - Station 137	HUC8 Name: Upper Androscoggin
Town: Rangeley	Latitude: 44 58 30.09 N
Directions: APPROX 750 M BELOW HATCHERY	Longitude: 70 46 49.97 W
	Stream Order: 3

**Sample Information**

<b>Log Number:</b> 2684	Type of Sample: ROCK BASKET	Date Deployed: 7/30/2018
Subsample Factor: X4	Replicates: 3	Date Retrieved: 8/29/2018

**Classification Attainment**

<b>Statutory Class:</b> A	<b>Final Determination:</b> A	Date: 3/11/2019
Model Result with $P \geq 0.6$ : B	<b>Reason for Determination: Best Professional Judgement</b>	
Date Last Calculated: 3/8/2019	Comments: Lake Outlet Effect.	

**Model Probabilities**

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.05	Class A, B, or C	1.00
Class B	0.76	Non-Attainment	0.00
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.98	Class A	0.03
Class C or Non-Attainment	0.02	Class B or C or Non-Attainment	0.97

**Model Variables**

01 Total Mean Abundance	3532.00	18 Relative Abundance Ephemeroptera	0.09
02 Generic Richness	34.00	19 EPT Generic Richness	18.00
03 Plecoptera Mean Abundance	32.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	312.00	23 Relative Generic Richness- Plecoptera	0.09
05 Shannon-Wiener Generic Diversity	2.58	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	1516.09
06 Hilsenhoff Biotic Index	4.28	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	24.92
07 Relative Abundance - Chironomidae	0.09	28 EP Generic Richness/14	0.64
08 Relative Generic Richness Diptera	0.32	30 Presence of Class A Indicator Taxa/7	0.29
09 <i>Hydropsyche</i> Abundance	886.67		
11 <i>Cheumatopsyche</i> Abundance	1438.67		
12 EPT Generic Richness/ Diptera Generic Richness	1.64		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	24.00		
16 Tanypodinae Mean Abundance (Family Functional Group)	0.00		
17 Chironomini Abundance (Family Functional Group)	29.56		

**Five Most Dominant Taxa**

Rank	Taxon Name	Percent
1	<i>Cheumatopsyche</i>	40.73
2	<i>Hydropsyche</i>	25.10
3	<i>Chimarra</i>	14.23
4	<i>Baetis</i>	7.21
5	<i>Cricotopus</i>	2.19



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

**Station Number: S-137**      Town: Rangeley      Date Deployed: 7/30/2018  
**Log Number: 2684**      Waterbody: Rangeley River - Station 137      Date Retrieved: 8/29/2018

**Sample Collection and Processing Information**

Sampling Organization: BIOMONITORING UNIT      Taxonomist: MICHAEL COLE

**Waterbody Information - Deployment**

Temperature: 22.7 deg C  
Dissolved Oxygen: 9.57 mg/l  
Dissolved Oxygen Saturation: 114.1 %  
Specific Conductance: 43.5 uS/cm  
Velocity: 61 cm/s  
pH: 7.09  
Wetted Width: 10.3 m  
Bankfull Width: 15 m  
Depth: 42 cm

**Waterbody Information - Retrieval**

Temperature: 21.8 deg C  
Dissolved Oxygen: 9.86 mg/l  
Dissolved Oxygen Saturation: 116.4 %  
Specific Conductance: 43.6 uS/cm  
Velocity: 79.2 cm/s  
pH: 6.94  
Wetted Width: 15 m  
Bankfull Width: 15 m  
Depth: 50 cm

**Water Chemistry**

**Summary of Habitat Characteristics**

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>
Upland Conifer	Open	Hilly
Upland Hardwood		
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>
Lake Outlet	Below Town	Boulder 70 %
Nutrients	Lake Outlet	Gravel 5 %
	Main Stem	Rubble/Cobble 25 %

**Landcover Summary - 2004 Data**

Total Area (ac)    63871	High Int. Dev. %    0.2	Water %    12.6	Non-vegetated %    0.4
	Med Int. Dev. %    0.3	Wetland %    3.2	Tilled Agriculture %    0.0
	Low Int. Dev. %    1.4	Upland Woody %    79.3	Grassland %    0.6
	Development %    1.9	Natural %    83.1	Human Altered %    4.3
			Impervious %    1.5

**Sample Comments**

BELOW FISH HATCHERY



**Maine Department of Environmental Protection  
Biological Monitoring Program  
Aquatic Life Taxonomic Inventory Report**

**Station Number: S-137**

Waterbody: Rangeley River - Station 137

Town: Rangeley

**Log Number: 2684**

Subsample Factor: X4

Replicates: 3

Calculated: 3/8/2019

Taxon	Maine Taxonomic Code	Count		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		(Mean of Samplers)				Actual	Adjusted
		Actual	Adjusted				
<i>Girardia</i>	03010102002	6.67	6.67		--	0.2	0.2
Perlodidae	09020207	8.00	8.00		--	0.2	0.2
<i>Acroneuria</i>	09020209042		8.00	0	PR		0.2
<i>Acroneuria abnormis</i>	09020209042121	8.00		0	PR	0.2	
<i>Paragnetina</i>	09020209049	5.33	16.00	1	PR	0.2	0.5
<i>Paragnetina immarginata</i>	09020209049149	9.33			--	0.3	
<i>Paragnetina media</i>	09020209049151	1.33			--	0.0	
<i>Baetis</i>	09020401001	21.33	254.67	4	CG	0.6	7.2
<i>Baetis flavistriga</i>	09020401001004	105.33			--	3.0	
<i>Baetis intercalaris</i>	09020401001008	21.33			--	0.6	
<i>Baetis pluto</i>	09020401001009	98.67			--	2.8	
<i>Baetis tricaudatus</i>	09020401001012	8.00			--	0.2	
Heptageniidae	09020402	2.67			--	0.1	
<i>Epeorus</i>	09020402009	1.33	3.08	0	SC	0.0	0.1
<i>Epeorus vitreus</i>	09020402009033	1.33			--	0.0	
<i>Maccaffertium</i>	09020402015	14.67	16.92	4	SC	0.4	0.5
<i>Isonychia</i>	09020404018	10.67	10.67	2	CF	0.3	0.3
Ephemerellidae	09020410	8.00			--	0.2	
<i>Ephemerella</i>	09020410035		5.71	1	CG		0.2
<i>Ephemerella subvaria</i>	09020410035111	4.00			--	0.1	
<i>Serratella</i>	09020410037		20.95	2	CG		0.6
<i>Serratella serratoides</i>	09020410037124	14.67			--	0.4	
<i>Chimarra</i>	09020601003		502.67	2	CF		14.2
<i>Chimarra obscura</i>	09020601003003	502.67			--	14.2	
<i>Neureclipsis</i>	09020603008	1.33	1.33	7	CF	0.0	0.0
<i>Nyctiophylax</i>	09020603009	1.33	1.33	5	PR	0.0	0.0
<i>Cheumatopsyche</i>	09020604015	1438.67	1438.67	5	CF	40.7	40.7
<i>Hydropsyche</i>	09020604016	188.00	886.67	4	CF	5.3	25.1
<i>Hydropsyche morosa</i>	09020604016030	105.33			--	3.0	
<i>Hydropsyche sparna</i>	09020604016032	592.00			--	16.8	
<i>Hydropsyche betteni</i>	09020604016037	1.33			--	0.0	
<i>Hydroptila</i>	09020607026	1.33	1.33	6	P	0.0	0.0
<i>Leucotrichia</i>	09020607032	9.33	9.33	2	SC	0.3	0.3
<i>Micrasema</i>	09020609044	2.67	2.67	2	SH	0.1	0.1
<i>Oecetis</i>	09020618078	2.67	2.67	8	PR	0.1	0.1
<i>Nigronia</i>	09020701003		1.33	0	PR		0.0
<i>Nigronia serricornis</i>	09020701003003	1.33			--	0.0	



**Maine Department of Environmental Protection  
Biological Monitoring Program  
Aquatic Life Taxonomic Inventory Report**

**Station Number: S-137**

Waterbody: Rangeley River - Station 137

Town: Rangeley

**Log Number: 2684**

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
Chironomidae	09021011	16.00			--	0.5	
<i>Nilotanytus</i>	09021011012			6	PR		
<i>Cardiocladius</i>	09021011034	1.33	1.41	5	PR	0.0	0.0
<i>Cricotopus</i>	09021011037	49.33	77.43	7	SH	1.4	2.2
<i>Cricotopus bicinctus</i>	09021011037057	24.00			--	0.7	
<i>Eukiefferiella</i>	09021011041		64.76	8	CG		1.8
<i>Eukiefferiella brehmi group</i>	09021011041073	48.00			--	1.4	
<i>Eukiefferiella pseudomontana group</i>	09021011041080	13.33			--	0.4	
<i>Nanocladius</i>	09021011049	4.00	4.22	3	CG	0.1	0.1
<i>Orthocladius</i>	09021011050	1.33	1.41	6	CG	0.0	0.0
<i>Parametriocnemus</i>	09021011053	34.67	36.60	5	CG	1.0	1.0
<i>Tvetenia</i>	09021011065		18.30	5	CG		0.5
<i>Tvetenia vitracies</i>	09021011065113	17.33			--	0.5	
<i>Rheotanytarsus</i>	09021011072		68.98	6	CF		2.0
<i>Rheotanytarsus exiguus group</i>	09021011072127	64.00			CF	1.8	
<i>Rheotanytarsus pellucidus</i>	09021011072128	1.33			CF	0.0	
<i>Polypedilum</i>	09021011102		29.56	6	SH		0.8
<i>Polypedilum flavum</i>	09021011102182	28.00			--	0.8	
<i>Simulium</i>	09021012047	20.00	20.00	4	CF	0.6	0.6
<i>Hemerodromia</i>	09021016057	5.33	5.33	3	PR	0.2	0.2
<i>Psephenus</i>	09021108058		2.67	4	SC		0.1
<i>Psephenus herricki</i>	09021108058028	2.67			--	0.1	
Trombidiformes	090302	1.33	1.33		PR	0.0	0.0
Sphaeriidae	10020201	1.33	1.33		CF	0.0	0.0