

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

Station Information

Station Number: S312	DEP Drainage: Penobscot
Waterbody: Birch Stream (Bangor)	HUC Code: 01020005
Town: Bangor	HUC Name: Lower Penobscot
Directions: dwnstrm of Ohio Street crossing	Latitude: Deg Min Sec
	Longitude: Deg Min Sec
	Stream Order: 1

Sample Information

Log Number: 1266	Type of Sample: Riffle Bags	Date Deployed: 30-JUL-03
Subsample Factor: X4	Replicates: 3	Date Retrieved: 27-AUG-03

Classification Attainment

Statutory Class: B	Final Determination: C	
Model Result with P > .6: C	Reason for Determination:	
Date Last Calculated:		

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.00	Class A, B, or C	1.00
Class B	0.01	Non-Attainment	0.00
	Class C		
	0.97		
	Class NA		
	0.03		
<u>B or Better Model</u>		<u>A Model</u>	
Class A or B	0.00	Class A	0.00
Class C or Non-Attainment	1.00	Class B or C or Non-Attainment	1.00

Model Variables

01 Total Abundance of Individuals	1237.33	18 Relative Abundance - Ephemeroptera	0.02
02 Generic Richness	28.00	19 EPT Generic Richness	5.00
03 Plecoptera Abundance	0.00	21 Sum of Abundances: <i>Dicrotendipes</i> ,	34.02
04 Ephemeroptera Abundance	25.33	<i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	
05 Shannon - Wiener Diversity	3.05	23 Relative Generic Richness- Plecoptera	0.00
06 Hilsenhoff Biotic Index	4.88	25 Sum of Abundances: <i>Cheumatopsyche</i> ,	216.74
07 Relative Abundance - Chironomidae	0.37	<i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	
08 Relative Generic Richness - Diptera	0.50	26 Sum of Abundances: <i>Acroneuria</i> , <i>Stenonema</i>	0.00
09 <i>Hydropsyche</i> Abundance	10.29	28 EP Generic Richness/14	0.07
11 <i>Cheumatopsyche</i> Abundance	1.71	30 Presence of Class A Indicator Taxa/7	0.00
12 EPT Generic Richness/ Diptera Generic Richness	0.36		

Five Most Dominant Taxa

		Taxa Rank	Taxa Name	Percent
13 Relative Abundance - Oligochaeta	0.00	1	Simulium	44.94
15 Perlidae Abundance (Family Functional Group)	0.00	2	Tanytarsus	14.19
16 Tanypodinae Abundance (Family Functional Group)	77.57	3	Gyraulus	6.68
17 Chironomini Abundance (Family Functional Group)	47.63	4	Conchapelopia	6.27
		5	Rheotanytarsus	3.74

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Sample Collection and Processing Information

Sampling Organization:
Taxonomist: Michael Winnell

Waterbody Information

Water Temperature:	19.6 °C	Specific Conductance	606.0 uS/cm	Channel Width:	3.1 m
Velocity:	11 cm/s	Dissolved Oxygen:	5.3 ppm	Channel Depth:	15.0 cm

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Stressor</u>	<u>Location</u>
Upland Hardwood Urban	Partly Open		Below Urban NPS

Substrate

Boulder	Rubble	Gravel
55%	30%	15%

Comments about the Station or Sample

8/27/03 Data:
Flow: 22.6 cm/s; Depth: 14cm; Temp: 19.0; SPC: 613uS/cm; DO: 7.8mg/L; pH: 7.22

Comments about the Final Determination

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Log Number: 1266 **Subsample:** X4 **Replicates:** 3 **Calculated:**

BioME Aquatic Life Taxonomic Inventory Report

Taxa	Code	Count (Average of Baskets)		Biotic Index Value	Functional Feeding Group	Relative Abundance	
		Actual	Adjusted			Actual	Adjusted
<i>Hydra</i>	02010101001	6.67	6.67		PR	0.5	0.5
<i>Tubificidae</i>	08020203	2.67	2.67		--	0.2	0.2
<i>Erpobdellidae</i>	08030301	16.00	16.00		--	1.3	1.3
<i>Nephelopsis</i>	08030301004	0.00	4.00		--	0.0	0.3
<i>Nephelopsis obscura</i>	08030301004001	4.00	0.00		--	0.3	0.0
<i>Baetis</i>	09020401001	4.00	25.33	4	CG	0.3	2.0
<i>Baetis flavistriga</i>	09020401001004	21.33	0.00		--	1.7	0.0
<i>Corixidae</i>	09020501	1.33	1.33		--	0.1	0.1
<i>Hydropsychidae</i>	09020604	2.67	0.00		--	0.2	0.0
<i>Cheumatopsyche</i>	09020604015	1.33	1.71	5	CF	0.1	0.1
<i>Hydropsyche</i>	09020604016	2.67	10.29	4	CF	0.2	0.8
<i>Hydropsyche morosa</i>	09020604016030	2.67	0.00		--	0.2	0.0
<i>Hydropsyche depravata-complex</i>	09020604016041	2.67	0.00		CF	0.2	0.0
<i>Hydroptilidae</i>	09020607	2.67	2.67		--	0.2	0.2
<i>Hydroptila</i>	09020607026	14.67	14.67	6	P	1.2	1.2
<i>Chironomidae</i>	09021011	9.33	0.00		--	0.8	0.0
<i>Conchapelopia</i>	09021011004	76.00	77.57	6	PR	6.1	6.3
<i>Cricotopus</i>	09021011037	28.00	39.47	7	SH	2.3	3.2
<i>Cricotopus bicinctus</i>	09021011037057	5.33	0.00		--	0.4	0.0
<i>Cricotopus vierriensis</i>	09021011037071	5.33	0.00		--	0.4	0.0
<i>Eukiefferiella</i>	09021011041	0.00	4.08	8	CG	0.0	0.3
<i>Eukiefferiella claripennis-grp.</i>	09021011041075	4.00	0.00		--	0.3	0.0
<i>Nanocladius</i>	09021011049	0.00	12.25	3	CG	0.0	1.0
<i>Nanocladius spiniplenus</i>	09021011049090	12.00	0.00		--	1.0	0.0
<i>Parametriocnemus</i>	09021011053	10.67	10.89	5	CG	0.9	0.9
<i>Micropsectra</i>	09021011070	33.33	34.02	7	CG	2.7	2.7
<i>Paratanytarsus</i>	09021011071	12.00	12.25	6	--	1.0	1.0
<i>Rheotanytarsus</i>	09021011072	45.33	46.27	6	CF	3.7	3.7
<i>Tanytarsus</i>	09021011076	172.00	175.56	6	CF	13.9	14.2
<i>Cryptochironomus</i>	09021011082	1.33	1.36	8	PR	0.1	0.1
<i>Polypedilum</i>	09021011102	1.33	46.27	6	SH	0.1	3.7
<i>Polypedilum aviceps</i>	09021011102181	28.00	0.00		--	2.3	0.0
<i>Polypedilum flavum</i>	09021011102182	16.00	0.00		--	1.3	0.0
<i>Simulium</i>	09021012047	0.00	556.00	4	CF	0.0	44.9
<i>Simulium vittatum</i>	09021012047064	556.00	0.00		--	44.9	0.0
<i>Hemerodromia</i>	09021016057	25.33	25.33	3	PR	2.0	2.0
<i>Chelifera</i>	09021016060	1.33	1.33		--	0.1	0.1

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		Actual	Adjusted			Actual	Adjusted
<i>Gastropoda</i>	1001	4.00	4.00		--	0.3	0.3
<i>Fossaria</i>	10010201021	2.67	2.67		--	0.2	0.2
<i>Planorbidae</i>	10010203	5.33	5.33		--	0.4	0.4
<i>Gyraulus</i>	10010203029	0.00	82.67		SC	0.0	6.7
<i>Gyraulus deflectus</i>	10010203029056	82.67	0.00		--	6.7	0.0
<i>Pisidium</i>	10020201002	14.67	14.67		CF	1.2	1.2