



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

Station Information

Station Number: S-268	River Basin:	Maine Coastal
Waterbody: West Branch Sheepscot River - Station 268	HUC8 Name:	St. George-Sheepscot
Town: China	Latitude:	44 22 4.48 N
Directions: WEEKS MILLS - 100 FT UPSTREAM OF DIRIGO RD CROSSING	Longitude:	69 31 52.65 W
	Stream Order:	3

Sample Information

Log Number: 2549	Type of Sample:	ROCK BAG	Date Deployed:	7/5/2017
Subsample Factor: X1	Replicates:	3	Date Retrieved:	8/1/2017

Classification Attainment

Statutory Class: AA	Final Determination: A	Date:	11/6/2017
Model Result with $P \geq 0.6$: A	Reason for Determination: Model		
Date Last Calculated: 11/6/2017	Comments:		

Model Probabilities

<u>First Stage Model</u>		<u>C or Better Model</u>	
Class A	0.87	Class C	0.00
Class B	0.13	NA	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	235.67	18 Relative Abundance Ephemeroptera	0.46
02 Generic Richness	66.00	19 EPT Generic Richness	28.00
03 Plecoptera Mean Abundance	7.00	21 Sum of Abundances: <i>Dicrotendipes</i> , <i>Micropsectra</i> , <i>Parachironomus</i> , <i>Helobdella</i>	0.00
04 Ephemeroptera Mean Abundance	108.33	23 Relative Generic Richness- Plecoptera	0.05
05 Shannon-Wiener Generic Diversity	4.33	25 Sum of Abundances: <i>Cheumatopsyche</i> , <i>Cricotopus</i> , <i>Tanytarsus</i> , <i>Ablabesmyia</i>	8.72
06 Hilsenhoff Biotic Index	4.39	26 Sum of Abundances: <i>Acroneuria</i> , <i>Maccaffertium</i> , <i>Stenonema</i>	9.67
07 Relative Abundance - Chironomidae	0.20	28 EP Generic Richness/14	1.14
08 Relative Generic Richness Diptera	0.29	30 Presence of Class A Indicator Taxa/7	0.43
09 <i>Hydropsyche</i> Abundance	0.67		
11 <i>Cheumatopsyche</i> Abundance	0.67		
12 EPT Generic Richness/ Diptera Generic Richness	1.47		
13 Relative Abundance - Oligochaeta	0.00		
15 Perlidae Mean Abundance (Family Functional Group)	2.67		
16 Tanypodinae Mean Abundance (Family Functional Group)	7.38		
17 Chironomini Abundance (Family Functional Group)	24.17		

Five Most Dominant Taxa

Rank	Taxon Name	Percent
1	<i>Tricorythodes</i>	31.68
2	<i>Dubiraphia</i>	8.77
3	<i>Microtendipes</i>	6.98
4	<i>Mystacides</i>	4.53
5	<i>Acerpenna</i>	3.39
6	<i>Maccaffertium</i>	3.39



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Station Number: S-268 Town: China Date Deployed: 7/5/2017
Log Number: 2549 Waterbody: West Branch Sheepscot River - Station 268 Date Retrieved: 8/1/2017

Sample Collection and Processing Information

Sampling Organization: BIOMONITORING UNIT Taxonomist: MICHAEL COLE

Waterbody Information - Deployment

Temperature: 20.5 deg C
Dissolved Oxygen: 10.41 mg/l
Dissolved Oxygen Saturation: 114 %
Specific Conductance: 88.5 uS/cm
Velocity: 12.2 cm/s
pH: 7.69
Wetted Width: 5 m
Bankfull Width: 8 m
Depth: 25 cm

Waterbody Information - Retrieval

Temperature: 19.5 deg C
Dissolved Oxygen: 10.15 mg/l
Dissolved Oxygen Saturation: 109.8 %
Specific Conductance: 101.3 uS/cm
Velocity: 9.1 cm/s
pH: 7.66
Wetted Width: 4.8 m
Bankfull Width: 8 m
Depth: 22 cm

Water Chemistry

Summary of Habitat Characteristics

<u>Landuse Name</u>	<u>Canopy Cover</u>	<u>Terrain</u>	
Pasture	Partly Open	Rolling	
Swamp Hardwood			
Upland Hardwood			
<u>Potential Stressor</u>	<u>Location</u>	<u>Substrate</u>	
Nps Pollution	Above Road Crossing	Boulder	15 %
		Detritus	5 %
		Gravel	20 %
		Rubble/Cobble	60 %

Landcover Summary - 2004 Data

Total Area (ac)	9414	High Int. Dev. %	0.1	Water %	3.6	Non-vegetated %	0.4
		Med Int. Dev. %	0.3	Wetland %	8.4	Tilled Agriculture %	2.6
		Low Int. Dev. %	3.9	Upland Woody %	74.9	Grassland %	5.8
		Development %	4.3	Natural %	82.6	Human Altered %	13.8
						Impervious %	3.3

Sample Comments

7/5/17: FISH, FRESHWATER MUSSELS AND CRAYFISH OBSERVED.
8/1/17: MANY FISH PRESENT.



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Aquatic Life Taxonomic Inventory Report**

Station Number: S-268

Waterbody: West Branch Sheepscot River - Station 268 Town: China

Log Number: 2549

Subsample Factor: X1

Replicates: 3

Calculated: 11/6/2017

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Leuctra</i>	09020204020	4.33	4.33	0	SH	1.8	1.8
<i>Acroneuria</i>	09020209042		1.67	0	PR		0.7
<i>Acroneuria arenosa</i>	09020209042122	1.67			--	0.7	
<i>Perlesta</i>	09020209046		1.00	5	PR		0.4
<i>Perlesta placida</i>	09020209046140	1.00			--	0.4	
<i>Boyeria</i>	09020301004		3.67	2	PR		1.6
<i>Boyeria vinosa</i>	09020301004012	3.67			--	1.6	
Gomphidae	09020302	1.00	1.00		--	0.4	0.4
<i>Hagenius</i>	09020302008		0.33	1	PR		0.1
<i>Hagenius brevistylus</i>	09020302008015	0.33			PR	0.1	
<i>Calopteryx</i>	09020307043	0.33	0.33	5	PR	0.1	0.1
<i>Acerpenna</i>	09020401007	3.00	8.00	5	CG	1.3	3.4
<i>Acerpenna macdunnoughi</i>	09020401007001	2.33			--	1.0	
<i>Acerpenna pygmaea</i>	09020401007011	2.67			--	1.1	
<i>Labiobaetis</i>	09020401009	0.33	0.33		--	0.1	0.1
<i>Procloeon</i>	09020401010	1.00	4.00		CG	0.4	1.7
<i>Procloeon rufostrigatum</i>	09020401010003	3.00			--	1.3	
<i>Leucrocuta</i>	09020402011	1.00	1.00	1	SC	0.4	0.4
<i>Stenacron</i>	09020402014		0.33	7	SC		0.1
<i>Stenacron interpunctatum</i>	09020402014045	0.33			--	0.1	
<i>Maccaffertium</i>	09020402015	6.33	8.00	4	SC	2.7	3.4
<i>Maccaffertium modestum</i>	09020402015051	1.00			--	0.4	
<i>Maccaffertium vicarium</i>	09020402015055	0.67			--	0.3	
Leptophlebiidae	09020406	2.00			--	0.8	
<i>Paraleptophlebia</i>	09020406026	1.67	2.67	1	CG	0.7	1.1
<i>Neoleptophlebia</i>	09020406027	1.67	2.67		--	0.7	1.1
<i>Ephemerella</i>	09020410035	0.67	0.67	1	CG	0.3	0.3
<i>Eurylophella</i>	09020410036	0.33	0.33	3	CG	0.1	0.1
<i>Serratella</i>	09020410037		0.67	2	CG		0.3
<i>Serratella serrata</i>	09020410037123	0.33			--	0.1	
<i>Serratella serratoides</i>	09020410037124	0.33			--	0.1	
<i>Tricorythodes</i>	09020411038	74.67	74.67	4	CG	31.7	31.7
<i>Caenis</i>	09020412040	5.00	5.00	7	CG	2.1	2.1
<i>Microvelia</i>	09020510025	0.33	0.33		PR	0.1	0.1
<i>Polycentropus</i>	09020603010	1.00	1.00	6	PR	0.4	0.4
<i>Cheumatopsyche</i>	09020604015	0.67	0.67	5	CF	0.3	0.3
<i>Hydropsyche</i>	09020604016		0.67	4	CF		0.3



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Log Number: 2549

Subsample Factor: X1

Replicates: 3

Calculated: 11/6/2017

Taxon	Maine Taxonomic Code	Count (Mean of Samplers)		Hilsenhoff Biotic Index	Functional Feeding Group	Relative Abundance %	
		Actual	Adjusted			Actual	Adjusted
<i>Hydropsyche betteni</i>	09020604016037	0.67			--	0.3	
<i>Macrostemum</i>	09020604018	0.33	0.33	3	CF	0.1	0.1
Hydroptilidae	09020607				--		
<i>Hydroptila</i>	09020607026	0.33	0.33	6	P	0.1	0.1
<i>Oxyethira</i>	09020607028	0.33	0.33	3	P	0.1	0.1
<i>Pycnopsyche</i>	09020610049	1.67	1.67	4	SH	0.7	0.7
<i>Lepidostoma</i>	09020611064	0.33	0.33	1	SH	0.1	0.1
<i>Helicopsyche</i>	09020616070	1.00	1.00	3	SC	0.4	0.4
<i>Mystacides</i>	09020618075		10.67	4	CG		4.5
<i>Mystacides sepulchralis</i>	09020618075147	10.67			--	4.5	
<i>Oecetis</i>	09020618078	0.67	1.33	8	PR	0.3	0.6
<i>Oecetis avara</i>	09020618078153	0.33			--	0.1	
<i>Oecetis persimilis</i>	09020618078157	0.33			--	0.1	
<i>Apatania</i>	09020619061	0.33	0.33		SC	0.1	0.1
<i>Nigronia</i>	09020701003		3.67	0	PR		1.6
<i>Nigronia serricornis</i>	09020701003003	3.67			--	1.6	
Chironomidae	09021011	0.33			--	0.1	
<i>Ablabesmyia</i>	09021011001	0.67	0.67	8	PR	0.3	0.3
<i>Larsia</i>	09021011009	0.33	0.34	6	PR	0.1	0.1
<i>Paramerina</i>	09021011013	0.33	0.34		--	0.1	0.1
<i>Thienemannimyia</i>	09021011020		6.04	3	PR		2.6
<i>Thienemannimyia group</i>	09021011020041	6.00			--	2.5	
<i>Cricotopus</i>	09021011037		3.36	7	SH		1.4
<i>Cricotopus bicinctus</i>	09021011037057	3.33			--	1.4	
<i>Nanocladius</i>	09021011049	0.33	0.34	3	CG	0.1	0.1
<i>Orthocladius</i>	09021011050	0.33	0.67	6	CG	0.1	0.3
<i>Orthocladius annectens</i>	09021011050092	0.33			--	0.1	
<i>Tvetenia</i>	09021011065		0.34	5	CG		0.1
<i>Tvetenia vitracies</i>	09021011065113	0.33			--	0.1	
<i>Paratanytarsus</i>	09021011071	4.67	4.70	6	--	2.0	2.0
<i>Rheotanytarsus</i>	09021011072		2.69	6	CF		1.1
<i>Rheotanytarsus exiguus group</i>	09021011072127	1.67			CF	0.7	
<i>Rheotanytarsus pellucidus</i>	09021011072128	1.00			CF	0.4	
<i>Stempellinella</i>	09021011074	0.33	0.34	2	--	0.1	0.1
<i>Tanytarsus</i>	09021011076	4.00	4.03	6	CF	1.7	1.7
<i>Pseudochironomus</i>	09021011078	0.33	0.34	5	CG	0.1	0.1
<i>Lauterborniella</i>	09021011092	2.33	2.35		CG	1.0	1.0
<i>Microtendipes</i>	09021011094		16.45	6	CF		7.0



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		Actual	Adjusted			Actual	Adjusted
<i>Microtendipes pedellus group</i>	09021011094166	15.33			--	6.5	
<i>Microtendipes rydalensis group</i>	09021011094168	1.00			--	0.4	
<i>Nilothauma</i>	09021011095	1.33	1.34	2	--	0.6	0.6
<i>Phaenopsectra</i>	09021011101	0.67	0.67	7	SC	0.3	0.3
<i>Polypedilum</i>	09021011102		3.02	6	SH		1.3
<i>Polypedilum aviceps</i>	09021011102181	2.33			--	1.0	
<i>Polypedilum flavum</i>	09021011102182	0.33			--	0.1	
<i>Polypedilum scalaenum group</i>	09021011102189	0.33			--	0.1	
<i>Neoplasta</i>	09021016064	0.33	0.33		PR	0.1	0.1
<i>Dineutus</i>	09021104032	0.33	0.33	2	--	0.1	0.1
<i>Psephenus</i>	09021108058		3.33	4	SC		1.4
<i>Psephenus herricki</i>	09021108058028	3.33			--	1.4	
<i>Ectopria</i>	09021109059		0.67	5	SC		0.3
<i>Ectopria nervosa</i>	09021109059029	0.67			--	0.3	
<i>Dubiraphia</i>	09021113064	20.67	20.67	6	--	8.8	8.8
<i>Macronychus</i>	09021113065		1.33	4	--		0.6
<i>Macronychus glabratus</i>	09021113065040	1.33			--	0.6	
<i>Microcyloepus</i>	09021113066		0.33	3	--		0.1
<i>Microcyloepus pusillus</i>	09021113066041	0.33			--	0.1	
<i>Optioservus</i>	09021113067	1.00	1.00	3	SC	0.4	0.4
<i>Promoresia</i>	09021113069		4.67		--		2.0
<i>Promoresia elegans</i>	09021113069051	2.00			--	0.8	
<i>Promoresia tardella</i>	09021113069052	2.67			--	1.1	
<i>Stenelmis</i>	09021113070	1.33	1.33	5	SC	0.6	0.6
Acariformes	090301	1.00	1.00		--	0.4	0.4
<i>Gyraulus</i>	10010203029		7.67		SC		3.3
<i>Gyraulus parvus</i>	10010203029057	7.67			--	3.3	
<i>Ferrissia</i>	10010204035		1.33		SC		0.6
<i>Ferrissia parallelus</i>	10010204035065	1.33			--	0.6	
Unionidae	10020102	0.33	0.33		CF	0.1	0.1