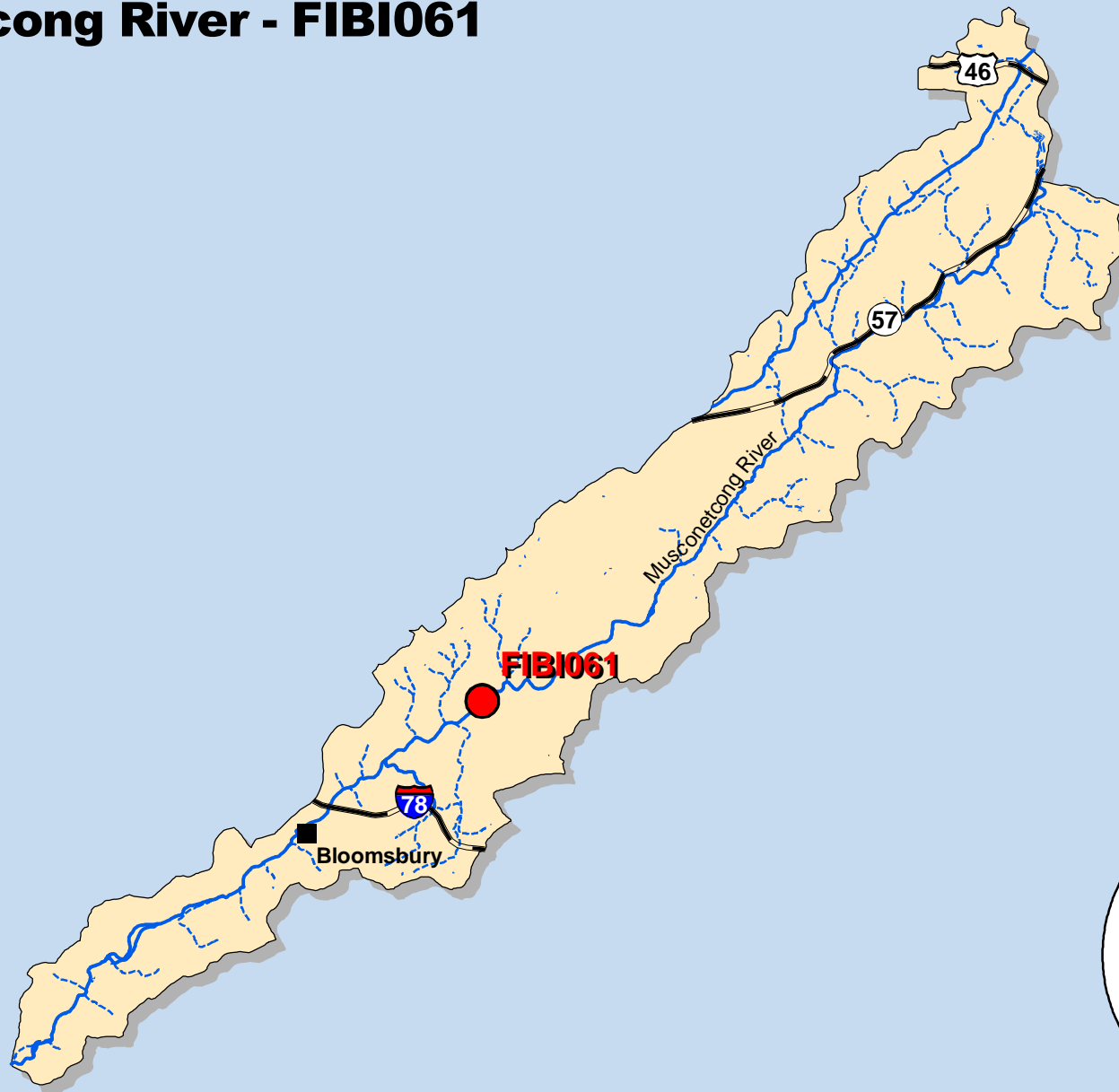





Musconetcong River - FIBI061



-  FIBI Sampling Location
-  Small Streams (1st and 2nd Order)
-  Large Streams (3rd Order and Above)



SUMMARY OF RESULTS

FIBI061 - Musconetcong River



1. Stream Name:	Musconetcong River
2. Sampling Date:	07-15-2003
3. Sampling Location:	632/Asbury-Bloomsbury Rd
4. Municipality	Greenwich
5. County:	Warren
6. Watershed Management Area:	1
7. Contributing Drainage Area:	132.7 Square Miles
8. Electrofishing Gear:	2 Backpack
9. FIBI Score and Rating:	28 - Poor
10. Habitat Score and Rating:	140 - Suboptimal
11. Fishable Species Present:	Yes
12. Relevant AMNET ¹ Station Data:	
Proximity of FIBI station to AMNET station:	1.2 mi upstream AN0073a
AMNET Rating:	Round 1 – N/A Round 2 – N/A Round 3 – N/A
13. Stream Chemistries:	
Dissolved Oxygen	12.3 mg/L
Temperature.	17.9 °C
pH	8.4
Conductivity	460 µmhos/cm
14. Number of Fish With Anomalies:	0
15. Length of Stream Segment Sampled	150 Meters
16. Water Clarity:	Clear
17. Average Forest Open Canopy:	96.7%
18. Discharge:	422.5 ft. ³ /sec
19. Substrate:	20% Gravel & Sand, 30% Cobble, 10% Boulder, 40% Bedrock
20. Habitat:	10% Riffle, 80% Run, 10% Pool
21. Snags	Yes
22. Periphyton	Moderate
23. Submerged Aquatic Vegetation	Yes
24. Other observations:	
25. Number of Fish Species Identified:	7
26. Total Number of Fish Collected:	70

¹ AMNET is the acronym for the DEP's ambient benthic macroinvertebrate monitoring network – a series of 820 monitoring stations located throughout the state's waterways that collects data on the health of bottom dwelling stream fauna which in turn is used to assess general water quality.

FIBIO6 1
MUSCONETCONG RIVER
ROUTE 632/ASBURY-BLOOMSBURY ROAD
FRANKLIN TOWNSHIP, WARREN COUNTY

Rte. 632/Asbury-Bloomsbury Road



LEGEND

- START
- FINISH
- SEGMENT SAMPLED
- ↑ DIRECTION OF FLOW



FIBI061 - Musconetcong River @ Rt 632
Date Sampled - 7/15/2003

Excellent Good Fair **Poor**

	Score
# of Fish Species	3
# of Benthic Insectivorous Species (BI)	3
# of Trout and Centrarchid Species (trout, bass, sunfish, crappie)	1
# of Intolerant Species (IS)	1
Proportion of Individuals as White Suckers	5
Proportion of Individuals as Generalists (carp, creek chub, banded killifish, goldfish, fathead minnow, green sunfish)	5
Proportion of Individuals as Insectivorous Cyprinids (I and BI)	3
Proportion of Individuals as Trout *whichever gives better score OR	
Proportion of Individuals as Piscivores (Excluding American Eel)*	1
Number of Individuals in Sample	1
Proportion of Individuals w/disease/anomalies (excluding blackspot)	5
Total	28

Stream Rating

- 45-50 Excellent**
- 37-44 Good**
- 29-36 Fair**
- 10-28 Poor**

HABITAT ASSESSMENT FOR *HIGH GRADIENT STREAMS* Musconetcong R. (FIBI061) – 7/15/03

	Condition Category																			
	Optimal					Suboptimal					Marginal					Poor				
1. Epifaunal Substrate /Available Cover Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient). SCORE 12	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
2. Embeddedness Gravel, cobble, and boulder particles are 0-25% surrounded by fine sediment. Layering of cobble provides diversity of niche space SCORE 6	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
3. Velocity/Depth Regimes All 4 velocity/depth regimes present (slow-deep, slow-shallow, fast-deep, fast-shallow). (slow is <0.3 m/s, deep is >0.5 m) SCORE 10	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
4. Sediment Deposition Little or no enlargement of islands or point bars and less than 5% (<20% for low-gradient streams) of the bottom affected by sediment deposition. SCORE 6	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
5. Channel Flow Status Water reaches base of both lower banks, and minimal amount of channel substrate is exposed. SCORE 19	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
6. Channel Alteration Channelization or dredging absent or minimal; stream with normal pattern. SCORE 19	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
7. Frequency of Riffles (or bends) Occurrence of riffles relatively frequent; ratio of distance between riffles divided by width of the stream <7:1 (generally 5 to 7); variety of habitat is key. In streams where riffles are continuous, placement of boulders or other large, natural obstruction is important. SCORE 19	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
8. Bank Stability (score each bank) Note: determine left or right side by facing downstream. SCORE <u>8</u> (LB) SCORE <u>8</u> (RB)	Left 10 9 Right 10 9					8 7 6 8 7 6					5 4 3 5 4 3					2 1 0 2 1 0				
9. Bank Vegetative Protection (score each bank) SCORE <u>9</u> (LB) SCORE <u>9</u> (RB)	Left 10 9 Right 10 9					8 7 6 8 7 6					5 4 3 5 4 3					2 1 0 2 1 0				
10. Riparian Vegetative Zone Width (score each bank riparian zone) SCORE <u>10</u> (LB) SCORE <u>5</u> (RB)	Left 10 9 Right 10 9					8 7 6 8 7 6					5 4 3 5 4 3					2 1 0 2 1 0				

HABITAT SCORE

140

HABITAT SCORES	VALUE
OPTIMAL	160 – 200
SUB-OPTIMAL	110 – 159
MARGINAL	60 – 109
POOR	< 60

FIBI061 07-15-2003

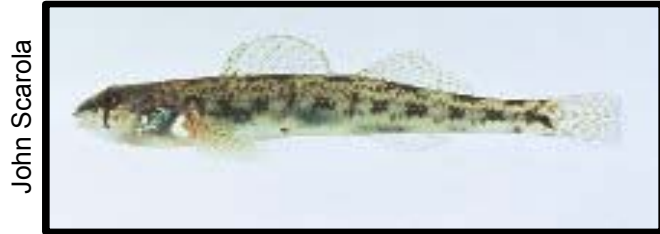
Musconetcong River

LISTED IN ORDER OF ABUNDANCE FOUND

COMMON NAME	SCIENTIFIC NAME	# FOUND	SIZE RANGE (INCHES)
American eel	<i>Anguilla rostrata</i>	48	
Blacknose dace	<i>Rhinichthys atratulus</i>	11	
Tessellated darter	<i>Etheostoma olmstedii</i>	4	
Brown trout	<i>Salmo trutta</i>	2	7.3 - 10.4
Satinfin shiner	<i>Cyprinella analostana</i>	2	
Rock bass	<i>Ambloplites rupestris</i>	2	6.7
Longnose dace	<i>Rhinichthys cataractae</i>	1	

* Regulated as a fishable species under current New Jersey Fish and Wildlife codes

Species Identified at Musconetcong River (FIBI061)
(Not to Scale)



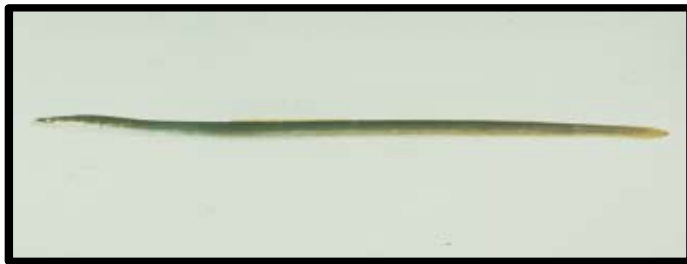
John Scarola

Tesselated Darter



Schute

Longnose Dace



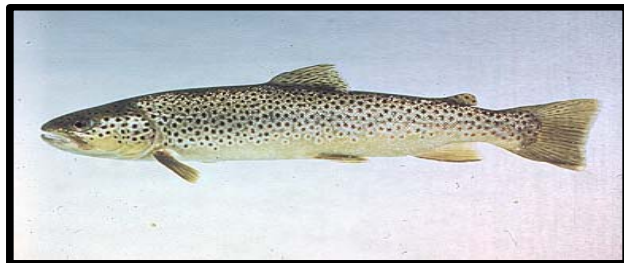
John Scarola

American Eel



John Scarola

Blacknose Dace



John Scarola

Brown Trout



John Scarola

Rock Bass

Species Identified at Musconetcong River (FIBI061)
(Not to Scale)

Jenkins & Burkhead



Satinfin Shiner