

Fish and Macroinvertebrate communities

R. Langdon and S. Fiske July 2001

-450 fish from 16 species were collected

Twelve sites from eight streams were sampled from the refuge

-No rare fish found

-streams were found fairly dilute and pH of 5.45-7.68

-three sites on the Yellow branch had lowest pH and alkalinities (pH 5.45-5.83, alk 2-4.5 mg/l). This may be limiting to sensitive fish. Values are low and are probably lower during spring snow melt which bring the highest acidities of the year

-blacknose dace, white sucker and brook trout were the most common fish species found (occurring at 9 sites)

-burbot and lake chub was the least common fish species; rated at “uncommon”

-rainbow trout and brown trout were only fish collected that were non-native to Vermont

-223 macroinvertebrate taxa were identified from the 17 stream sites sampled within the Nulhegan River watershed; all were common; all were native; none were listed

-14 species of mollusks were found; one state threatened (Eastern pearlshell mussel (*Margaritifera margaritifera*) and one uncommon buffalo pebblesnail (*Gilia altilis*) found in Stevens Brook)

I. Threatened/Endangered/State concern species

-No state or federally listed species have been historically reported from this drainage or were found during study

-No threatened or endangered species found

Threatened in Vermont: Mollusca species

- **Eastern pearlshell mussel (*Margaritifera margaritifera*)**
Found at the 4.5m in the Nulhegan River
Prefers moderate gradient streams and rivers, cold water, and cobble/gravel/sand substrate reaches

II. List of species sampled in the Nulhegan River drainage

Type	Species	Species
Fish	Fallfish (<i>Semotilus corporalis</i>)	
	Chain pickerel (<i>Esox niger</i>)	
	White sucker (<i>Catostromus commersoni</i>)	
	Longnose Dace (<i>Rhinichthys cataractae</i>)	
	Tessellated Darter (<i>Etheostoma olmstedii</i>)	
	Blacknose Dace (<i>Rhinichthys atratulus</i>)	
	Brown bullhead (<i>Ameiurus nebulosus</i>)	
	Brown trout (<i>Salmo trutta</i>)	
	Burbot (<i>Lota lota</i>)	
	Common shiner (<i>Luxilus cornutus</i>)	
	Creek chub (<i>Semotilus atromaculatus</i>)	
	Slimy sculpin (<i>Cottus cognatus</i>)	
	Lake chub (<i>Couesius plumbeus</i>)	
	Golden shiner (<i>Notemigonus crysoleucas</i>)	
Macroinvertebrates	Aquatic leaf beetle (<i>Chrysomelidae unid</i>)	Midge (59 species)
	Riffle beetle (13 species)	Dixid midge (<i>Dixa sp.</i>)
	Whirligig beetle (<i>Gyrinidae sp.</i>)	Aquatic longlegged fly (<i>Dolichopodidae unid</i>)
	Water penny (2 species)	Aquatic dance fly (<i>Empididae unid</i>)
	Predaceous diving beetle (2 species)	Aquatic muscid (<i>Muscidae unid</i>)
	Crawling water beetle (2 species)	Moth fly (3 species)
	Water weevil (<i>Curculionidae unid</i>)	Common burrower (<i>Ephemeridae funeralis</i>)
	Rove beetle (<i>Staphylinidae unid</i>)	Mayfly (11 species)
	Westernsnipe (<i>Atherix sp.</i>)	Caddisfly (47 species)
	Biting midges (2 species)	Dragonfly and damselfly (12 species)
	Stonefly (24 species)	Scud (<i>Hyalaleia azteca</i>)
	Alserfly/dobbsongfly (2 species)	Snail (9 species)
	Butterfly/moth (<i>Petrophila sp.</i>)	Flatworm (2 species)

	Mussel and clam (7 species)	Aquatic segmented worm (6 species)
	Horsehair worm (<i>Gordius sp.</i>)	Watermites (4 species)
	Leech (<i>Nephelopsis obscura</i>)	
	True bugs (7 species)	

V. Management Recommendations

The authors made no management recommendations.