

## History of the Shepaug River and its Environs

From the beginning of human settlement in this swatch of Connecticut, the Shepaug River has been a centerpiece of industry and culture. It flows today through the quiet, well-to-do towns of Warren, Woodville, Washington and Roxbury, whose residents have spared no expense to preserve the river that gives such scenic value to the area. The Shepaug is a tumbling, tree lined, nearly unspoiled waterway for all of its course, except for the two dams at its source that create upper and lower Shepaug Reservoirs above Woodville. The geology of the landscape has created a cold, fast-flowing, steeply graded river, ideal for trout and, at one time, water power for industry.

The first settlers in the area included Zachariah Walker in 1673, a puritan and religious dissident, whose name is preserved in Walker Brook, a small stream rich with little brook trout that runs into the Shepaug in downtown Washington Depot. Walker found the local Pootatuck Indians hunting and fishing in the area, and growing cucumbers, beans, corn and tobacco along the river. Increasing settlement by Europeans eventually drove the native Americans to sell all of their tribal lands, and by the late 1670's, they had either assimilated with the European societies or migrated out of the area. From that point on, settlers worked at logging, farming and the making of charcoal. Within the next hundred years, the forests of the Shepaug Valley were completely destroyed, and the quality of the river seriously compromised. With the discovery of coal in Pennsylvania, and the loss of the source of charcoal in Connecticut, the forests slowly regrew, and the quality of the river improved.

Only 10 or 15 miles to the east, another river of nearly identical topography flows through what used to be a similar landscape. However, the history of the Naugatuck River was completely different from that of the Shepaug: the one-time major industrial cities of Connecticut are found along its banks, from Torrington in the north to Thomaston, Waterbury, Naugatuck and Derby to the south. In the late 19<sup>th</sup> and early 20<sup>th</sup> centuries, the Naugatuck river spawned the great factories of these towns that manufactured everything from fishing tackle and skates (Torrington), clocks (Thomaston), Goodyear's rubber boots and the much-maligned plastic-coated upholstery cloth called "Naugahyde" (made in, of course, Naugatuck). By far the most spectacular financial success came with the brass industry, centered in Waterbury. Waterbury had 25 brass factories in 1858, and 39 by 1896. These mills employed as many as 25,000 people by World War I

While the factory owners and investors flourished, the Naugatuck river sickened and died. All of the effluent from the factories – the pickling acids, metal oxides and solvents – as well as the untreated sewage from the rapidly growing population, flowed freely into the Naugatuck, changing its color daily from green to blue to orange to yellow, depending on the day's manufacturing process. Waterbury didn't

have a single sewage treatment plant until the 1950's. What had been a tumbling trout stream became one long, stinking, dead sewer.

How did the Shepaug valley escape the industrial development that defined the Naugatuck? Iron ore in Roxbury, mills in "Factory Hollow" (now Washington Depot) and the installation of a railroad line up to Litchfield could have resulted in a river much like the Naugatuck. The rapid development of industry just after the Civil War made it possible for the towns along the Shepaug to open a number of small, water-powered businesses: quarries for limestone, marble and garnet, hat-making factories, foundries, tanneries, cooperages (barrel-makers) and sawmills. The discovery of a small vein of iron-rich siderite ore in Roxbury prompted the founding of the "Spathic Iron and Steel Company" on Mine Hill in 1864. Connecting all of this was to be the Shepaug Valley Railroad, conceived and promoted by Major Edwin McNeill.

If the railroad had been completed as originally scheduled, the Shepaug valley might be a much different place today. However, McNeill's railroad suffered financial and physical setbacks. The course of the tracks had to make over 200 turns and tunnel through 180 feet of tough schist in what is now Steep Rock Preserve. The railroad was opposed by the farmers and other residents of the valley, who were suspicious of the arrival of rowdy German and Italian immigrants, as well as of wealthy New Yorkers who might buy up all of the land. The blasting expert, the colorful Glycerine Jack Booth, suffered from a tapeworm that, when he finally excreted it, measured 24 feet, 4 inches, causing even further delays. Finally, by 1872, the 31-mile railroad was completed, just in time for the financial collapse of the Spathing Iron and Steel Company and of steel prices in general, the financial panic of 1873, and the ending of the post-Civil War manufacturing boom. The Shepaug Valley railroad went bankrupt in 1873.

What had been intended to be a pipeline of manufactured goods made in the Shepaug Valley to be delivered to the populous cities, the Shepaug railroad became a way to bring them in, as well as the wealthy New Yorkers, artists, weekenders and sportsmen that the natives had feared. Instead of factories, Roxbury and Washington grew inns, hotels, and lodges to house the well-to-do immigrants. From that point on, the Shepaug Valley would be the summer home of some of the wealthiest families in America, and they would protect their new homes from development with vigor and all the influence their money could buy. The famous architect, Ehrick Rossiter, who built many of the elegant "cottages" of the wealthy families the Van Sinderens, Van Dykes and Van Ingens, purchased 500 acres of old growth hemlock to prevent it from being sold to a lumber company. At the end of his life, Rossiter made a bequest of the land, called Steep Rock Preserve, to the town of Washington. Later, the Van Sinderens donated their estate, Holiday House in Hidden Valley, to the preserve. Today, the Steep Rock Preserve comprises more than 1,500 acres, including Hidden Valley, Steep Rock and the Macricostas Preserve.

Though separated by 20 miles and industrial fortune, Waterbury's thirsty manufacturing centers would have a serious, long-term effect on the Shepaug. In 1893, the state legislature enacted the "Special Law Authorizing the City of Waterbury to Increase its Water Supply", which stated that the city was "authorized and empowered to take and convey from any and all brooks, rivers, springs, ponds, lakes and reservoirs within the limits of the county of New Haven or of the county of Litchfield, such supply of water as the necessities or convenience of the inhabitants of said city may require". By 1921, Waterbury had decided that the water they needed would come from the Shepaug river. The brass companies hired Robert Cairns, a brilliant engineer, to design a set of dams and a tunnel that would divert the Shepaug River to the town of Waterbury. Within months, 2,000 "mole men" were at work on the 7-mile tunnel, and by 1926, the project was completed. From that point on, the Shepaug's flow would be only minimal, and in the summer the river would run almost dry, killing off much of the fish and other organisms that required its natural flow to survive. To add to the tragedy, within 50 years of the completion of the tunnel, Waterbury's brass industry was completely dead, and Waterbury went from a manufacturing capitol to a town plagued by crime, poverty, urban blight and toxic waste.

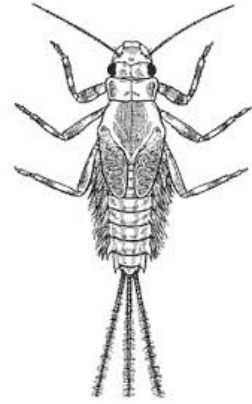
But this is not the end of the story for the Shepaug. Residents and others concerned with the health of the Shepaug entered into legal disputes with Waterbury, and after 10 years of wrangling, were able to end Waterbury's command of the Shepaug's flow. In 2005, the state of Connecticut and its Department of Environmental protection arranged an agreement by which Waterbury would redesign its dams to release a minimum of 12 million gallons per day during the dry months of the summer, up from the trickle of 1.5 million gallons a day that they had released since the 1920's. Today, we are only a couple years into this new release program, and our study of the river and its health will add important data to the assessment of the health of the Shepaug.

Primary Source:

George Black's *Trout Pool Paradox: The American Lives of Three Rivers*, Houghton-Mifflin, 2004.

# Macroinvertebrate Research Project

In preparation for our river study field trip, you and your group will become experts in the identification and natural history of a particular species or type of species of freshwater macroinvertebrate. Your job will be to research, draw, and present your creature to the class. When we've collected our samples, you will be responsible for helping to identify your own organism.



## Organism species for research (choose 2):

### Mayfly

Two-Tailed Flat-head Mayfly (Epeorus)  
Body-builder Mayfly (Drunella)  
Minnow Mayfly (Isonychia)  
Flat-head Mayfly (stenonema)

### Stonefly

Giant Stonefly (pteronarcys)  
Common Stonefly (perlidae)  
Peltoperlidae

### Caddis

Saddle-casemaker (Glossosoma)  
Cornucopia Case-builder (Apatania)  
"Michelin-Man" Caddis (Ryacophila)  
Other case-makers: (Brachycentrus and Lepidostoma)  
Common Net-Spinner (hydropsychidae)  
Fingernet (chimarra)

Water Penny (psephenus)

Dobsonfly or Fishfly (corydalus or nigronia)

Dragonfly or Damselfly (Order Odonta)

## Project Requirements:

1. Include information on:
  - sensitivity to pollution/oxygen ("tolerance")
  - life cycle
  - habitat and diet ("feeding group")
2. Diagram/drawing with significant characteristics, *parts labeled* of larva and adult (where appropriate)
3. Any other helpful diagnostic info ("diagnostic" means "aiding identification")