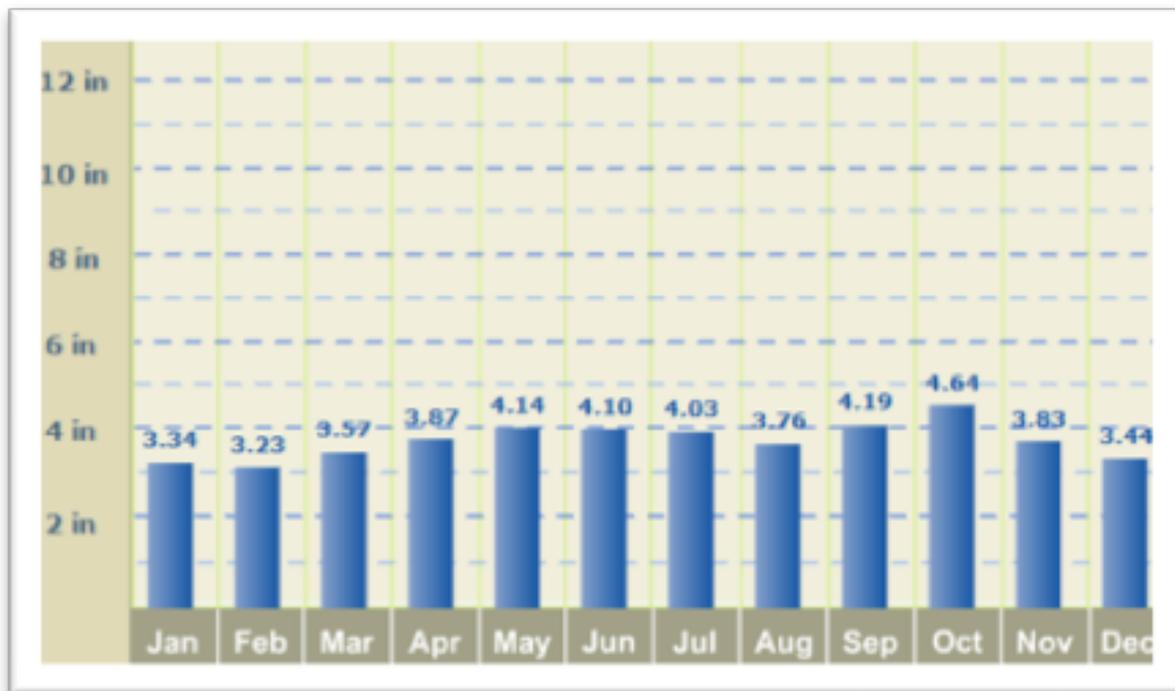


What's the Deal with the Summer Drought?

Take a guess: which month in New England receives the least precipitation? Think about it. Did you guess August? July? It has to be during the summer, right? Well, have a look at the graph on this page which shows the average monthly precipitation in Greenfield, MA from *weather.com*.

It turns out that precipitation in New England is fairly evenly distributed throughout the year. February tends to be the month with the least moisture, but only because it has the fewest days. So, if precipitation is more or less even across all months, why do rivers seem to all but dry up most summers?



It turns out that vegetation plays a much bigger role than precipitation in sucking our rivers dry. Tree roots are capable of exerting extreme suction – so much so, that they can dry the soil out far more efficiently than simple evaporation or air drying. Thus, as soon as trees leaf out, you can expect to see river levels start to drop. As trees take more and more moisture from the soil, a rise in river flow becomes progressively less likely. By August or September, the soil is so dry that it can easily absorb a good summer storm. Thus, when a drenching summer squall passes overhead, you'll sometimes notice almost no difference in river flow, even though our fields get a good watering.

I don't want to say that trees suck, but they do. They suck the soil dry. It's a predictable and age-old

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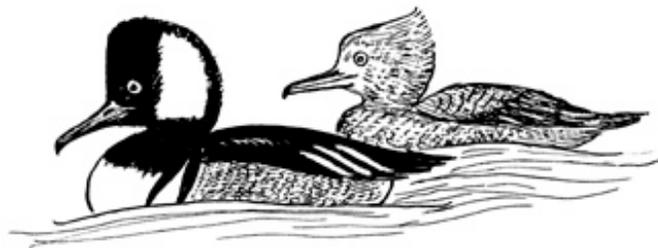
process to which our riparian ecosystems are well tuned. River critters can cope with a little bit of low flows, so long as there is good habitat and plenty of shade to see them through the stressful conditions. Problems can occur, however, when humans artificially remove water from streams when conditions are most precarious. Therefore, even in relatively moist New England, be mindful of your water use. Every drop is priceless.

- Brian Yellen

DRWA Annual Meeting Announcement

Please join us at the DRWA's annual meeting, Tuesday, October 16, 2012 at the Four Rivers Charter School, 248 Colrain Road, Greenfield. The public is welcome to attend this free meeting and presentation. Refreshments and social at 6:30 pm followed by a brief meeting at 7 pm to elect board members. This year's presentation is: **Big Voices from Tiny Bodies** - Come hear DRWA's Mike Cole tell us about eight years of studying the macroinvertebrate life in the Deerfield River watershed's rivers and streams. During this time, DRWA has examined macroinvertebrates as indicators of the impacts of dam operations along the Deerfield River and of the effects of Tropical Storm Irene. DRWA has also studied macroinvertebrate communities in our smallest of streams - called headwaters - that are too often ignored in other assessments of watershed health. In addition to these studies, DRWA has been monitoring the health of each of the watershed's major tributaries since 2005, including the Green, South, and North rivers. Come hear what the "bugs are telling us" about our watershed!

- Johanna Castilla



The Riverfest Report

RiverFest, held on Saturday June 9th, 2012 in Shelburne Falls was the best ever. We had the most cooperative weather in a long time, and the Frog and Flower parade was a big draw. The Deerfield River Chapter of Trout

Unlimited increased their participation this year. On the banks of the Deerfield River, they gave very popular demonstrations and instructions in fly casting. Zoar Outdoor river raft rides were well attended. In Memorial Hall, Piti Theater gave a production of "To Bee or Not To Bee," explaining Colony Collapse Disease, and Marmalade Productions presented a show about recycling. We are glad that the businesses of Shelburne Falls appreciate RiverFest so much because it makes it possible for the Shelburne Falls Area Business Association to take the lead, leaving the DRWA more time and energy to raise awareness in the public about watershed issues and showcase the many projects taking place in the region.

- Polly Bartlett

Please Join Us for the Green River Cleanup

The DRWA and the Connecticut River Watershed Council invite all river lovers to the annual Source to Sea Cleanup and the 9th annual Green River Cleanup. The cleanup will be held on Sept. 29th, 2012 at the Green River Swimming Area on Nash's Mill Road in Greenfield. River rats will gather from 9 am to 3 pm. Come when you can! Breakfast and lunch will be provided by area restaurants. Music will be provided by the Equalites from 12 to 2 pm. Bring your fun self, friends, water boots, rakes, shovels, and trucks to dig in and clean up. If you know of any sites that need attention, please leave a message for David Boles at CRWC, 413-772-2020 or for more information.

- David Boles

A Call For River Volunteers

The Massachusetts Division of Ecological Restoration (DER) has recently set up a stream gage on the lower Chickley River in Charlemont as part of their RIFLS (River Instream Flow Stewards) program. The purpose of the gage is to understand the flows on the Chickley River as we observe either the restoration of the channel dredging work, or how the river changes over time after the flooding from Tropical Storm Irene and the dredging.

Volunteers are needed to visit the site once a week, almost year-round. At each visit, the gage off the bridge will be read using binoculars (e.g., make note of the river level on the gage). The data are then submitted to DER. No prior experience is necessary. A training session for volunteers will be held the third week of

September. If you are interested, please contact Andrea Donlon of the Connecticut River Watershed Council at adonlon@ctriver.org or 413-772-2020 x. 205, or during the week of September 10th, contact laila.parker@state.ma.us or 617-626-1533.

- Andrea Donlon

Mast and Wildlife

It's hard to believe that the first day of fall is less than a month away. After this record-breaking hot and dry summer, we look forward to the cool, crisp days of fall. This is the time of year when many of us are freezing and canning the local fruits and vegetables. Some mammals and birds are doing something similar. Their diet starts to transition from insects and green plants to fruits and nuts. If you spend any time in the woods, it's hard not to notice the acorns, hickory nuts and beechnuts falling to the forest floor.

The seeds and nuts produced by local trees and shrubs are called "hard mast." Soft mast refers to the fruits and berries produced by woody plants. The most important hard mast-producing trees and shrubs in our region include the oaks, American beech, hickories, and hazelnuts. Animals, primarily mammals and birds, store the fats and carbohydrates in nuts as food reserves to help them survive the winter. The list of species that utilize hard mast includes the wild turkey, ruffed grouse, red-bellied woodpecker, blue jay, deer mouse, gray squirrel, white-tailed deer, black bear, gray fox, and many others.

In the fall, wild turkeys and black bears spend the majority of their time in forests dominated by beeches and oaks. Gray squirrels spend their entire lives in mast-producing forests. Biologists studying gray squirrels have found that in years with a poor mast crop, fewer animals survive the winter and females produce smaller litters. A similar trend has been observed in black bears.

A few weeks ago, during a walk at Poet's Seat Tower in Greenfield, I noticed two squirrels in the topmost branches of the pignut hickories that are common along the road. I realized that the squirrels were foraging for hickory nuts. When I looked at the ground, it was littered with dozens of half-eaten hickory nuts that the squirrels had dropped.

Trees and shrubs produce different amounts of mast in different years. What causes this phenomenon? Several factors account for the variation, including the amount of sunlight reaching the tree, insect pests and diseases, effects of weather, and the size and age of the tree. For example, American beeches produce a large amount of beechnuts at 2-8 year intervals, starting when they're about 50 years old.

The American chestnut was once an important native, mast-producing tree common in our region. Most

people are familiar with the story of the American chestnut that was decimated by the fungus bark disease introduced to the United States in the early 1900s. The disease was thought to have come from Chinese chestnut trees imported into the country via New York City in 1904. Within a generation, most American chestnut trees were gone. Chestnut forests were found on drier sites and the nuts were used as food by both wildlife and humans. With the chestnut gone, mast-producing oaks increased in numbers, along with black cherry, red maple, and black birch.

During your next walk in the forests of western Massachusetts, look for our mast-producing trees: oaks, hickories, and beech. I often scan the forest floor for acorns and other nuts to determine how many are left uneaten by the local wildlife. Try to imagine what it was like to walk in a forest with towering chestnut trees and appreciate what we have left.

- Patricia Serrentino



Nut from the Pignut Hickory Tree, a favorite food of gray and red squirrels and the Eastern chipmunk

Report of the June 9th Negus Ridge Hike

We were 16 intrepid hikers and one canine taking our breath in perfectly beautiful weather conditions. The mountain laurel was in absolute full bloom all over the woods and trail on Negus Ridge, no petal fall yet. The wood thrush, hermit thrush (or maybe it was a veery) and a chorus of other ornithological spirits called out as we went along. The ovenbirds kept telling us to "teach her" but I tried to explain she wasn't on the hike.

We started a little late from Shunpike at about 10:20 am, several carpooling, and wound our way up steep Steel Brook Road. We took the woods trail down from the meadow near the intersection of Tunnel and

Steel Brook Roads where we left the cars. We hiked up onto the Negus Ridge and enjoyed the laurel and clear views. Marley, some kind of tall terrier or poodle found one of the mud puddles particularly cooling and delightful. He wallowed and rolled until he looked more



like black angus than grey dog. We chased up a group of ruffed grouse on the trail back down. Back at the cars at about 1:20 pm after returning up Steel Brook Road, having lunched at the top of Negus a little after noon, six plus Marley took leave of the rest of the group before hiking to Fife Brook Overlook. The 10 remaining hikers found the Fife Brook trail replete with beaver dam, impressively straight and tall oak, ash and big tooth aspen trees, lichened granite outcrops along the palisades, and of course the special view at the end of the short steep climb. A few of us lagged behind towards the end and the rest got back to the cars earlier leaving a note about their departure. The last of us left the Shunpike about 4:15 pm.

What a nice group of people to have on this hike. Hailing from Bennington, Vermont, and Sunderland, Granby, Shelburne Falls, Heath, Northampton, Florence, Greenfield, and Holyoke, there was much to share and learn about who we were.

- Arthur A. Schwenger

North River Cleanup Draws a Crowd

In April, the North River Cleanup drew about 70 volunteers to remove Tropical Storm Irene-related debris from a section of river starting in the center of Colrain and heading upstream for about two miles. The event, organized by the Deerfield River Watershed Chapter of Trout Unlimited with some assistance from DRWA and CRWC, included several members of the DRWA and its board, as well as a team of student volunteers from the Eaglebrook School in Deerfield. While nearly two dumpster loads of debris were removed, the event

organizers foresee the need to continue the effort in the future.

- Mark Burton





Photo credits: Page 3 & 5: Patricia Serrentino; Page 4: Mark Burton

DEERFIELD RIVER CURRENT

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The Deerfield River Watershed Association is a non-profit organization with the mission to preserve, protect, and enhance the natural resources of the Deerfield River watershed in southeastern Vermont and northwestern Massachusetts. Its activities include water quality monitoring, educational programs, administration of volunteer programs and participation in regulatory matters.

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HELP OUT AT THE GREEN RIVER CLEANUP SEPTEMBER 29TH

DON'T MISS THE ANNUAL MEETING ON OCTOBER 16TH

CHECK INSIDE FOR DETAILS AND FOR GREAT ARTICLES ON THIS
SUMMER'S DROUGHT AND MAST AND WILDLIFE

