

WATERSHED

A Newsletter of the Wood-Pawcatuck Watershed Association

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Summer 2013

Dragons & Darners & Damsels, Oh My! by Hugh Markey

The warm sun is setting over the pond, and it seems like a nice time for your first flight of the day. As a mosquito, you aren't exactly going to win any popularity contests, but hey, it's a living. Off you go in search of a tasty treat, hopefully from one of those large creatures wearing floppy hats you see floating on the water in their brightly colored plastic things. Yes, the one on the left will do just fine...

Just as you're about to land and begin dining, you are hit by a massive impact. Before you can figure out what's happening, you're traveling at 30 mph, a speed no mosquito is capable of. You wriggle as hard as you can to escape, but it's no use: this thing has legs that cup you in place, and each leg has a heavy armor of spines. The last sight you see are those eyes, huge and brown and there seem to be hundreds of them and you are not going to be around for another flight... You have just become dinner for the Umber Shadowdragon.

While the emotive embellishments by this author have no basis in science, the rest of the scene above plays out hundreds of times a day in Rhode Island's ponds and rivers, according to biologist Virginia "Ginger" Brown. Speaking at a recent event at the Wood Pawcatuck Watershed Association (WPWA),



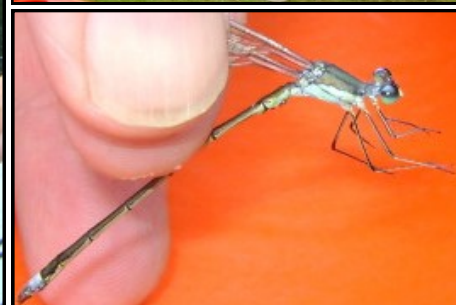
A White Corporal dragonfly demonstrates an easy way to tell the difference between damselflies and dragonflies: dragonflies land with wings spread out to the side & damselflies land with wings placed back over and parallel to their body.

Can you see two teneral adults on this piece of pickerelweed?

Below right: A participant carefully holds a Variable Dancer.



Biologist Ginger Brown demonstrates dragonfly capture techniques.



Brown has been studying animals like the Umber Shadowdragon for over 33 years.

The Umber Shadowdragon is just one of 137 species of dragonflies and damselflies found in Rhode Island. Brown knows this well, because she spent a decade heading a group of scientists and volunteers whose task it was to catalogue every variety in the state. The group paddled, waded, and marched through tens of thousands of acres of land and water. In spite of the daunting nature of the task, or perhaps because of it, Ginger Brown evinces enthusiasm for these ancient creatures.

"I used to be a bird watcher, then a butterfly follower," she says, "until I discovered dragonflies and damselflies. This is the REAL stuff!"

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From the Executive Director

It was an exciting and busy summer for WPWA's board, staff, and our members. More than a thousand children and their families were provided an opportunity to commune with the rivers thanks to several grants WPWA received for 2013. The third and final phase of WPWA's upper Pawcatuck River fish passage projects went into construction, after nearly a decade of fundraising and planning. None of these accomplishments would have been possible without your moral and financial support. Thank you for all that you do to help protect our beautiful watershed!

As the upper Pawcatuck projects begin to come to a close, WPWA is refocusing its boundless energy on revitalizing our board and members. In 2014, changes will continue to be made with an emphasis on better serving you, our members. Further improvements are planned for the WPWA campus and throughout the watershed. WPWA is planning more public access improvement projects along with our programmatic changes.

Despite the federal economic climate, I am pleased to announce that the US Fish & Wildlife Service has secured over \$2 million for improving fish passage on the lower Pawcatuck River. Clearly, your advocacy toward improving the watershed is paying off. 2014 is sure to be an exciting year for us all and we look forward to continuing our service to you and this fine watershed.



WATERSHED GREEN CORNER

These articles are brought to you by RI NEMO - Produced by URI Cooperative Extension for RI Stormwater Solutions, a project funded by the RI Department of Transportation, in partnership with the RI Department of Environmental Management and RI municipalities. Articles have been formatted by WPWA to fit this space.

Don't Be A Turkey! Protect Waterways From Stormwater Pollution!

by Lisa DeProspo Philo & Lorraine Joubert, RI NEMO

For most Americans, November conjures thoughts of Thanksgiving and turkeys on the table. Don't be the turkey in your neighborhood by ignoring the pollution of local waterways through stormwater runoff.

Stormwater runoff is the water you see flowing down the street when it rains. It picks up pollutants as it flows, but is almost never treated, and it can be responsible for closing swimming beaches and fishing grounds, threatening water resources, harming natural areas, and contributing to flooding! Fortunately, there are many ways that you can help, and your very own neighborhood is a great place to start.

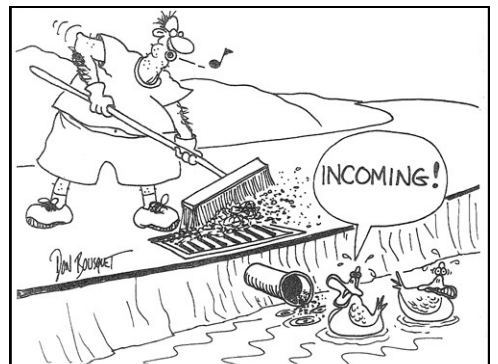
Because Thanksgiving is often a time to gather with family and friends, our stormwater solutions this month center upon actions you can take in your own community.

Our website, www.ristormwatersolutions.org, has a section devoted to the steps Rhode Islanders can take to prevent stormwater pollution in their communities. It includes detailed descriptions of what's involved in getting a pet waste station installed, as well as how to hold a neighborhood rain barrel sale or a storm drain marking event.

The value of most of these activities lies not just in the pollution that they can prevent, but also in the education and involvement of community members as they work together to make their neighborhood a little better.

For example, many dog owners don't realize that bags of dog waste should not be thrown down a storm drain, because many people view storm drains merely as trash receptacles. A pet waste station and well-placed signage can bring attention to the fact that dog waste belongs neither on the sidewalk nor in the storm drain, in addition to providing bags and a trash can for the waste.

So, this Thanksgiving, after the turkey meal is eaten, if you find yourself with a little time on your hands, check out our website. You'll find many important ways that you can help protect our local water resources for all Rhode Islanders to enjoy.



Thank you **Don Bousquet** for your cartoon donation!



Are There Alligators in the River? by Denise Poyer

The kids got off the bus and looked around nervously at the flowing river, the trees, and the lack of buildings. After spraying themselves thoroughly with insect repellent, they started asking questions. “Miss, will we go over the waterfall?” “Miss, are there alligators in that water?” “Miss, is something going to bite me?” Some just came right out and said, “I’m really scared!” These were kids from Providence, Pawtucket, Central Falls, Woonsocket, and West Warwick who were about to get into a kayak for the first time in their lives. They were taking part in *Engaging Underserved Urban Youth with the Out-of-Doors through Wood River Explorations*, a summer program put on by WPWA and the Environmental Council of Rhode Island (ECRI). ECRI, who is the local National Wildlife Foundation (NWF) affiliate, proposed the project last winter. NWF has a small grant program for affiliates that, among other goals, seeks to connect children to nature. ECRI was awarded \$3,300 to have WPWA teach kids how to kayak on the Wood River.


Participants from an after school program explore the Frying Pan Pond section of the Wood River, while in kayaks the first time.




The WPWA Campus is the ideal location to teach anyone to paddle. Barberville Dam creates a quiet, pond-like setting in front of the public launch site at the campus. Within a short paddle upstream the river is full of marsh plants and wildlife. Our fleet of 30 single person, 9-foot kayaks (half of which were donated by Chariho Middle School students) can accommodate large and small groups. Two of our staff are trained in American Canoe Association Kayak Instruction Level I, the basics of paddling. With over 15 years of experience taking people out on the water, WPWA can provide a unique and positive experience for even the most timid of beginners.

For this program, ECRI and WPWA targeted children who would normally not have a chance to learn an outdoor skill, like kayaking. WPWA reached out to four organizations which provide enrichment programs to urban and/or at-risk youth: University of Rhode Island Science and Math Investigative Learning Experience; Providence After School Alliance; Reaching Youth through Service and Education; and the Gateways Organization Adventures in Learning Program. Through these organizations, we connected with three other partners – Biomes Marine Biology Center, Foster Parrots, and the Roger Williams Park Zoo Education Department; and eight middle and high schools.

We also provided paddles for Operation Military Kids, a group that provides summer activities for children who have at least one parent serving in active duty.

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WPWA MEMBERSHIP APPLICATION



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Dragonflies and damselflies (damselfly is not a name for a female dragonfly; they are two different species) have been around for roughly 260 million years, according to Brown. Back then, they grew to the size of a crow, but today the largest has a wingspan of about four inches. Dragonfly wings are perpendicular to the body, a characteristic that distinguishes it from damselflies, most of which perch with their wings folded. The wings sport veins, which give the structure a wrinkled look when viewed closely, and in turn aid with flight. In addition to forward motion, they can fly backwards, sideways, even upside down, all of which makes capturing a challenge, according to Brown.

With some exceptions, dragons and damsels live for about a year, with as much as ten months of that time spent under water as a larva. During that time, they feed on other insects, and even on tiny fish. Despite a name like a “darter” (named for a sewing needle), these animals do not sting. Brown says they have given her a small bite on rare occasions when she has accidentally mishandled them, but otherwise they are completely harmless – to humans, that is. For mosquitoes, not so much.

When it comes to identifying these insects, any science student knows they should be properly identified by their Latin name. This is done in order to avoid confusion with regional names. (Consider the fish people love to catch and eat at this time of year: in New England, most people know it as striped bass, but in Delaware, it’s known as a rockfish. And those treats eaten on the half shell are known locally as quahogs, but most everyone else knows them as hard shell clams.) However, one may be forgiven for choosing to use the common names for dragons and damsels, because they are possibly the most colorfully named group of animals known. In addition to the Shadowdragon, these animals sport names like Ringed Boghaunter, Sparkling Jewel Wing, Zebra Club Tail, and Meadowhawk, to name just a few. Not scientific, perhaps, but as whimsical as it gets.

Ginger captures & displays a Sparkling Jewel Wing.



A program participant examines one of the larger dragonflies discovered on the paddle.

The lecture ends and, after a demonstration in dragonfly capture techniques, it’s time to venture onto the Wood. The Wood-Pawcatuck Watershed accounts for the greatest level of health and biodiversity of any watershed in the state. Brown says that dragons and damsels are good indicators of the health of a body of water, and the Wood has a wide assortment of them as a result of its health.

Almost immediately, Brown captures the first dragonfly: a Sparkling Jewel Wing. It is about two inches long, and its body does sparkle like an emerald. Surprisingly, Brown holds the fly by its wings to show the group. Unlike butterflies or moths, dragons and damsels may be handled this way for identification without damaging the wings. Once the group has a chance to see it, Brown releases the Jewel Wing, which flies away none the worse for wear.

Overcast skies mean that there may not be the full variety of creatures normally present on the river; Brown says that they’re cold-blooded, and many varieties, especially the larger ones, prefer the warmth of the full sun before they take flight. Smaller species are prevalent, however, and there is no shortage of captures and identifications. Brown also points out what appears to be a dried husk of an insect on vegetation rising from the water. Called an “exuvia”, this is the exoskeleton of the nymph stage of a dragonfly.

After the larva has developed underwater for months, it crawls out onto some type of above-water vegetation. The husk splits, and the newly formed dragon or damsel emerges.

At first the newcomer, known as a “teneral adult”, is pale and seems to lack the solid structure of the mature dragon. After a short time spent in the air and sun, the more visible veins of the wings will materialize, the body will gain its color and shape, and it will begin its final stage of life, perhaps much to the dismay of mosquitoes.

Hugh Markey is a freelance writer and naturalist. His blog, "Science and Nature for a Pie", focuses on a variety of outdoor topics. Follow him at <http://scienceandnatureforapie.com>.

WATERSHED **KIDS' CORNER**

Fall nature walk  how many can you spot?



pine cone yellow leaf berries

branch bird

bug moss flower

orange leaf tree without leaves red leaf

tree with leaves

www.apopofpretty.com

Fall is the perfect time to take a hike & enjoy nature! Here are 10 tips for hiking with kids:

BRING:

- 1-A backpack
- 2-Snacks & H₂O
- 3-Proper shoes (& a spare pair)
- 4-A camera
- 5-Orange vest & wear it in all State Mgmt Areas during hunting season

LOOK:

- 6-For a walking stick
- 7-For wildlife, bugs, plants, holes, treasures
- 8-Out for things on the path (rocks, roots)
- 9-For berries & poisonous plants & teach kids not to touch them

AND:

- 10-Have fun!

Check out these spots in the watershed for some great hikes:

Arcadia Management Area

Browning Mill Pond

Carolina Management Area

USFWS Kettle Pond @ Ninigret NWR

Go to our shop (www.wpwa.org/shop.php), or send in the order form on page 7, to purchase Walks in the Watershed, A Hiker's Guide to Southwestern Rhode Island and Adjacent Connecticut, which includes descriptions and maps of 20 local hikes!

A great stocking stuffer for just \$5.00!

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From May to August of 2013, WPWA hosted 182 children on twelve paddles of the Wood River. The youth organizations provide supervision and transportation to the WPWA Campus. The youth were given instructions in kayak paddling before being launched into boats for the paddle upstream. Most paddles lasted from 1 to 1 ½ hours. Participants saw painted turtles, fish, great blue herons, osprey, aquatic flowering plants, and numerous damselflies and dragonflies. At appropriate points during the paddle, WPWA staff discussed river ecology and the qualities of clean water systems.

This project was an unqualified success. Most of the children attending had rarely been out of the city and had never before had a chance to engage in an outdoor activity on a clean, natural river. While many arrived with expressions of fear and anxiety, they quickly caught on to the basics of paddling. They got to try something very much out of their comfort level and learn a little about the Wood River. The real success of this project is due to the ten volunteers who helped out with the paddles – Jim Cole, Martha Cruciani, Andy Fantoni, Bill Hahn, Elly Heyder, Meg Kerr, Diane Laderoute, Corry Mott, Michael Rinaldi, and Gary Whitney. They made the kids feel at ease, coaxing them gently onto the water, then watching them, and providing instructions as needed. One volunteer stood in the cold water (in May) holding onto a young girl's boat, and let her grip his hand, until she felt comfortable enough to start paddling on her own. Other volunteers towed participants who were getting a little too tired and pulled stuck boats off of sandbars. They helped keep the trips organized and safe.

The best question I heard, while we were returning back to the dock, was from a young man who asked, "Miss, when do we get to do this again?"

After learning the basic strokes & paddling safety, students carefully get into kayaks & onto the water.



Jim Cole, a WPWA volunteer, assists youth with avoiding other kayaks on the river.



A large group of students learn about river ecology after learning how to raft together in still water.



Eagle Scout Projects at WPWA

This summer, with the help of WPWA, two intrepid young men conducted community service projects to help earn their Eagle Scout ranking. Jacob Migdail-Smith had six fellow scouts and seven adults complete improvements to the Browning Mill Pond Trail in the Arcadia Management Area. During the weekend of September 7th and 8th, they repaired and replaced two bridges, installed a fence to help with erosion control, and cleaned and marked the trail. WPWA secured funding for the project from the Rhode Island Trail Advisory Committee. Jacob received donations from Stop & Shop, BJ's Wholesale Club, and The

Home Depot. The two-mile Browning Mill Pond Trail, which is maintained by WPWA, is a popular trail for families and hikers of all ages.


Jesse Jacques, with the guidance and assistance of Chris Fox, undertook the tough job of clearing the lower Wood River from the Hope Valley Dam down to Woodville Dam. On September 15th eight scouts and seven adults accompanied Jesse and Chris with hand tools and chainsaws to remove trees, branches, and other obstructions from the river. WPWA works to keep the Wood and Pawcatuck rivers navigable, which is greatly appreciated by the paddling community.



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Reusable Sandwich Container - Put an end to using disposable baggies with this oversized sandwich container. The attached lid means no more searching for the right fit! Perfect for the back-to-schoolers in your home.		\$5.00		
Ball Cap - This washed, twill cap is 100% cotton and has a Velcro closure that tucks in on the backside, so no more hanging Velcro strips! "WPWA" & the WPWA logo are beautifully embroidered on the front.	one size fits most	\$15.00		
Green Tee - Show everyone that you support your favorite watershed organization with this 100% cotton, preshrunk, short sleeve tee by Gildan. On the back is a list of our five favorite rivers in the watershed.	Select Size: S/M/L XL/2XL	\$15.00		
Navy Polo - This classic, three-button polo is perfect for any occasion! It's a breathable blend of poly and cotton and will keep you looking good as you show your support with its high-quality embroidered WPWA logo.	Select Size: S/M/L XL/2XL	\$25.00		
Reusable Market Tote - Picking up a few groceries at the local farmer's market has never looked so good! This 100% cotton canvas bag's bottom is gusseted to ensure years of use and there is even a small zippered pocket to keep your keys and cash handy.		\$12.00		
Wood-Pawcatuck River Guide - A comprehensive fold-out map and guide to paddling the Wood and Pawcatuck Rivers.		\$5.00		
Walks in the Watershed - A pocket guide detailing 20 of the watershed's best loop hikes in southwestern RI and adjacent Connecticut.		\$5.00		
Earth Friendly Alternatives - A concise guide for anyone who wants to lessen the impacts of toxins and chemicals in and around the home.		\$7.00		
Cliff Vanover's Pocket Trail Guides - The best maps of the Arcadia Management Area that WPWA has found! They are waterproof, depict topography, latitude/longitude, hike length, & note public/private lands. (<i>Note Carolina & Burlingame are together in one map.</i>)	Choose Map Arcadia \$12.95 Big River \$9.95 Carolina & Burlingame \$6.95 Pachaug \$9.95			
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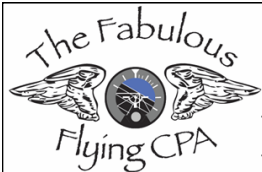
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WPWA Campus

203 Arcadia Road
Hope Valley, RI 02832
401-539-9017
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