



A Quarterly Publication from the Division of Fish and Wildlife, RI Department of Environmental Management

The Return of the Peregrine *by Christopher Raithel*

Those of a certain age may remember Rachel Carson's seminal book "Silent Spring," in which she assailed the agri-chemical industry by describing the deleterious effects of pesticides on wildlife and humans. Indeed, this book was so important that it is sometimes credited with galvanizing the entire conservation movement and facilitating the ban on domestic DDT spraying in 1972. Better late than never, as the saying goes, but by then a lot of damage had already been done to the environment.



Peregrines nesting on the Newport Bridge.

Photo: M. J. Amaral

Many wildlife populations took a huge hit during the

spraying era, but the ones that attracted the most attention were showy seabirds and hawks, many of whose populations plummeted perilously close to extinction. One of the poster children of the early environmental movement was the Peregrine Falcon (*Falco peregrinus*). Peregrine Falcons are charismatic and familiar birds because of their bold plumage and aerial expertise, and lay claim to being the world's fastest animal. A Peregrine Falcon in a full

nose-dive, wings held back and letting gravity do most of the work, can reach airspeeds in excess of 200 mph. Peregrines prey on other

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Mount Hope Boat Ramp *by James McGinn*



The Department of Environmental Management has opened a rehabilitated boat ramp to Mount Hope Bay, the Mount Hope Fishing Access. This site is located on Anawamscutt Drive in Bristol. The access area provides Rhode Island's only improved public boat launching ramp into Mount Hope Bay. The site is owned by the Rhode Island

Department of Human Services as part of the RI Veterans Home complex. The Department of Environmental Management acquired a new, 25-year lease to the waterfront property upon which the access site has existed since the 1960s. Funding for the \$1.2 Million project was provided by the Fed-

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THE DIVISION OF FISH AND WILDLIFE MISSION STATEMENT:

Our mission is to ensure that the Freshwater, Marine and Wildlife resources of the State of Rhode Island will be conserved and managed for equitable and sustainable use.



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Environmental Management

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Mount Hope Boat Ramp by James McGinn *continued from page 1*



eral Aid in Sportfish Restoration Program with the local match coming from the value of the real estate. The project was designed by Gordon R. Archibald, Inc. of Pawtucket under the direction of the DEM Division of Planning and Development, and was constructed by HK&S Construction Holding Corporation of Newport, RI.

The old ramp was only 10 feet wide and fully exposed during low tide, making it unusable by boaters. Since the site was not being used by boaters, it became a haven for illegal dumping and teenage parties, creating a nuisance to the local neighborhood. The new ramp is relocated slightly north of the old one in an area that naturally provides greater water depth. Even in the new location, a new four-foot deep channel was created by removing approximately 2,500 cubic yards of dredge material, during low tide, from the toe of the ramp to deep water. Dredge spoils were disposed of under the new paved parking area, which provides parking for 49 vehicles with trailers and five trailerless vehicles. A new 1,000 foot roadway was created from Annawamscutt Drive into the site. The new ramp is 60 feet wide and is constructed with the standard precast concrete boat ramp slabs that DEM has used at other facilities since the late 1990s. The ramp also has two floating courtesy docks that will be

in the water from April to December each year. One of the floating courtesy docks provides a fully ADA-compliant route from the parking area to the water, similar to the existing ramp at Haines Memorial State Park in East Providence.

The paved parking area has been designed to be compliant with the new DEM Stormwater Manual. It features several bioretention soil and filter areas to provide adequate treatment of stormwater runoff before it discharges into Mount Hope Bay. The site also features a small gazebo with benches, a patio, and a new flagpole.

Throughout the project, the Department received tremendous support from the Town of Bristol. Now that the site is opened, the Town has taken over the daily operation and will handle litter pick-up and general site maintenance. At their request, Phase II of the project will include the installation of low intensity site lighting in the parking area and along the access road to discourage the illegal dumping and parties that plagued the old site.

If you would like to see the site for yourself, it is located at the end of Annawamscutt Drive which is off Metacom Avenue (RI 136) in Bristol.

Piping Plover Restoration by Cheryl Wiitala, TNC

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Adult Piping Plover.



Photos: USFWS

Piping Plover chick.



The Piping Plover (*Charadrius melodus*) is a small, stocky, sandy-colored bird resembling a sandpiper. The adult has yellow-orange legs, a black band across the forehead from eye to eye, and a black ring around the base of its neck. Like other plovers, it runs in short starts and stops. When still, the Piping Plover blends into the pale background of open, sandy habitat on outer beaches where it feeds and nests. The bird's name derives from its call notes, plaintive bell-like whistles which are often heard before the birds are seen. The Piping Plover breeds on coastal beaches from Newfoundland and southeastern Quebec to North Carolina. These birds winter primarily on the Atlantic Coast from North Carolina to Florida, although some migrate to the Bahamas and West Indies. Piping Plovers were common along the Atlantic Coast during much of the 19th century, but nearly disappeared due to excessive hunting for the millinery trade. Following passage of the Migratory Bird Treaty Act in 1918, numbers recovered to a 20th Century peak in the 1940s. The current population decline is attributed to increased development and recreational use of beaches since the end of World War II. The most recent surveys place the Atlantic population at less than 2,000 pairs. The piping plover became a protected species under the Endangered Species Act on January 10, 1986. Along the Atlantic Coast it is designated as threatened, which means that the population would continue to decline if not protected. The Endangered Species Act provides penalties for taking, harassing or harming the piping plover and affords some protection to its habitat.

The Division of Fish and Wildlife provides grants through the State Wildlife Grant program and has partnered with The Nature Conservancy (TNC) and the U. S. Fish and Wildlife Service (USFWS) to provide protection services and conduct monitoring and education for the Piping Plover and Least Terns along the Rhode Island coastline. TNC covers Little Compton and Block Island, and the USFWS is responsible for the coastline between Napatree Point in Westerly and Sachuest Point in Middletown. The following is a summary of TNC's activities over the past year. In the future we plan to include an update of USFWS services as well.

The 2011 Piping Plover breeding season at nesting sites in Little Compton, RI, was a successful one relative to previous years. This season, all sites monitored by The Nature Conservancy in Rhode Island had nesting plovers that fledged chicks. A total of 15 pairs of Piping Plovers fledged 33 chicks, for an overall productivity of 2.20 chicks fledged per pair. This surpassed 2010's Piping Plover productivity of 1.67 chicks fledged per pair, (18 pairs of Piping Plovers fledged 30 chicks). Two sites in Little Compton receive monitoring and management attention by TNC. At Goosewing Beach Preserve, six pairs of Piping Plovers produced 8 nests (they usually re-nest after nest failures). A total of 16 chicks hatched from these nests and 12 survived to fledge, giving Goosewing an overall productivity of 2.00 chicks fledged per pair. Four pairs of plovers nested at Briggs Beach, producing four nests. At Briggs Beach, 15 chicks hatched and 13 chicks survived to fledge, resulting in a productivity of 3.25 chicks fledged per pair. The breeding biology and population dynamics of the Atlantic Coast population of Piping Plovers are very well known and scientists of the Atlantic Coast Piping Plover Recovery Team have been able to estimate how much annual productivity (new young) is required for a stable population. In 2011, the Little Compton productivity exceeded the 1.50 chicks fledged per pair level thought necessary to sustain a population.

Staffing for the shorebird monitoring and education program in 2011 consisted of the shorebird preserve assistant, education coordinator, preserves manager and operations assistant. In addition, two volunteer interns assisted with monitoring and educational activities. Furthermore, TNC had the help of volunteers, who assisted in staffing the Benjamin Family Environmental Center at Goosewing Beach Preserve, removing trash from the beach, and keeping an eye on the Piping Plovers and least terns, as well as helping to monitor the beach while informing and educating the general public.

A total of 33 education programs were held during the 2011 season, which attracted 355 participants. The education program consisted of 16 nature walks, seven seine net programs, 8 children's explorer's programs, and Goosewing Family Day. In addition, 628 people of all ages visited the Benjamin Family Environmental Center at Goosewing.

If you would like to volunteer for the program please contact Cheryl Wiitala at The Nature Conservancy at (401) 331-7110 x 25 and Erin King at the U. S. Fish and Wildlife Service at (401) 255-3818 for more information.

The Return of the Peregrine *by Christopher Raithel*

birds and they kill by striking their prey or, if the prey is smaller, by just grabbing it with their oversized feet and talons. Unfortunately, the Peregrine Falcon had the dubious distinction of being one of the "original" endangered species. Both the arctic and American subspecies (*F. p. tundrius* and *anatum*, respectively) were listed as endangered under the Endangered Species Conservation Act of 1969 (the law preceding the Endangered Species Act of 1973).

After listing, the U.S. Fish and Wildlife Service appointed Peregrine Falcon recovery teams to recommend actions necessary to restore the birds in the United States. As part of recovery efforts, scientists at Cornell University successfully bred and raised Peregrine Falcons in captivity. Through a cooperative effort among the U.S. Fish and Wildlife Service and several other groups, more than 6,000 American Peregrine Falcons were released after 1974. The release of captive-bred peregrines involves a process known as "hacking." Young birds are placed in specially equipped boxes on top of a manmade tower or cliff ledge. At first, the birds are fed through a chute so they cannot see their human benefactors. When they are old enough, the box is opened and the young peregrines begin testing their wings. Their food is gradually reduced as the young falcons learn to hunt on their own.

At the time of the Peregrine's endangered listing, the eastern subspecies was actually extinct and the migratory arctic population was severely reduced. By the 1980s we were still seeing a few arctic migrants in Rhode Island; these appeared in a regular pattern during fall (October) and occasionally in spring (March or April). The re-establishment of nesting Peregrine Falcons in Rhode Island followed the typical track for a colonizing species. Even though no releases were done in Rhode Island, we benefited from dispersing birds produced by successful programs in other Northeastern States. By the 1980s, immature birds were being sighted in Rhode Island at unusual dates; that is, outside of the normal migratory window. By 1990, adult birds were consistently seen perched on large structures, especially the bridges over Narragansett Bay. Initially, these sightings occurred mostly during winter and did not attract undue attention because arctic birds could also winter in Rhode Island. However, as adults began to establish a more consistent presence on the bridges and lingered into the summer, nesting seemed imminent.

A Peregrine Falcon in flight.



Photo: USFWS, B. Buchanan

In the mid-1990s, Joe Zbyrowski thought it would be a good idea to put up nesting boxes at likely locations in the state. On his own initiative, he constructed and deployed two nesting boxes in Providence; one on the Industrial National Bank Building, and the other on a warehouse in the Port of Providence. The bank box was almost immediately occupied by Peregrines, and nesting has continued at that site nearly continuously since that time. Buoyed by this success, attention then turned to the bridges, where the Rhode Island Turnpike and Bridge Authority and the Rhode Island Department of Transportation were hugely supportive in monitoring birds and watching for nesting activity. Eventually, nesting was confirmed on the Newport (Pell) Bridge. This was followed shortly thereafter by confirmed nesting on the Mount Hope Bridge. As nesting boxes were placed on these sites and were used, the population continued to expand and new birds continue to show up and establish territories elsewhere in Rhode Island. This year there were five active Peregrine Falcon nests in Rhode Island.

The program to restore Peregrine Falcons was obviously successful. There are now over 2,000 pairs breeding each year across the United States. As a result of this comeback and reduced levels of contaminants, the Peregrine was removed from the FWS List of Threatened and Endangered Species on August 25, 1999. A Peregrine Falcon dive-bombing through a flock of birds is arguably one of the most magnificent sights in nature. Thanks to the dedication of several scientists and a lot of hard work, Rhode Islanders now have the opportunity to witness it.

Wild Teacher Training by Kimberly Sullivan

As a fisheries biologist, environmental educator, and Rhode Island's aquatic resource education coordinator, my main goal and purpose is to teach people of all ages to connect with their natural environment via any means necessary. For some people, connecting to their environment could be cutting a hole in the ice, setting up tilts and waiting for that fish to bite while drinking hot chocolate. Some prefer to commune with nature wading in a peaceful stream, studying the insects, tying the fly, and casting that fly to catch a trout. Others go on field trips with their children to build a tide pool on the beach and witness what wonders live in the ocean.

Regardless of the different methods available to connect people with nature, the best time to teach the importance of our natural resources is when children are young. That is why for over 20 years the Division of Fish and Wildlife has offered teacher training in various environmental education curricula such as *Project Wild & Wild Aquatic*, *Project WET*, *WOW! The Wonders of Wetlands*, and an exciting new curriculum specifically geared toward pre-schoolers: *Growing Up Wild!* These curricula provide not only a tool for teachers to help their students become acquainted with the environment, but also can be used by scout leaders, home school groups, youth groups, and other environmental educators across the state.

In this age where technological advancements progress hourly, children are exposed to more than just television. They are able to network world-wide over the internet, on their phones and even through video games. With the whole world at your fingertips, who needs to get outdoors? While the future may seem bleak, new initiatives such as 'The No Child Left Inside' makes way for our schools to incorporate environmental education into their curriculum. Some states are even incorporating environmental education into their state standards curriculum. The ARE program is working with other environmental agencies such as the Audubon Society and Wood-Pawcatuck Watershed Association to provide teachers resources that can be easily incorporated into their classroom. The following is a quick summary of the curricula, which the ARE program is trained in facilitating:

Project WILD/WILD Aquatic

Published by the Council for Environmental Education in 1983, Project WILD is a multi-disciplinary tool designed to explore all environmental issues and present them in a comprehensive form to be used in schools K-12. Each activity comes with background information and various ways to



adapt the activity to each grade level. The curriculum is indexed various ways to aid teachers in quickly finding age appropriate activities as well as help teachers easily incorporate it into the state curriculum, whether reading, writing, math or science.

Project WILD Aquatic is an educational supplement that addresses water related issues in a similar format. The Division of Fish and Wildlife and the Audubon Society of RI have facilitators who offer training to groups all over Rhode Island. To procure a book, a six-hour teacher training is mandatory. The books are free to all those who participate in a teacher training.

Project WET

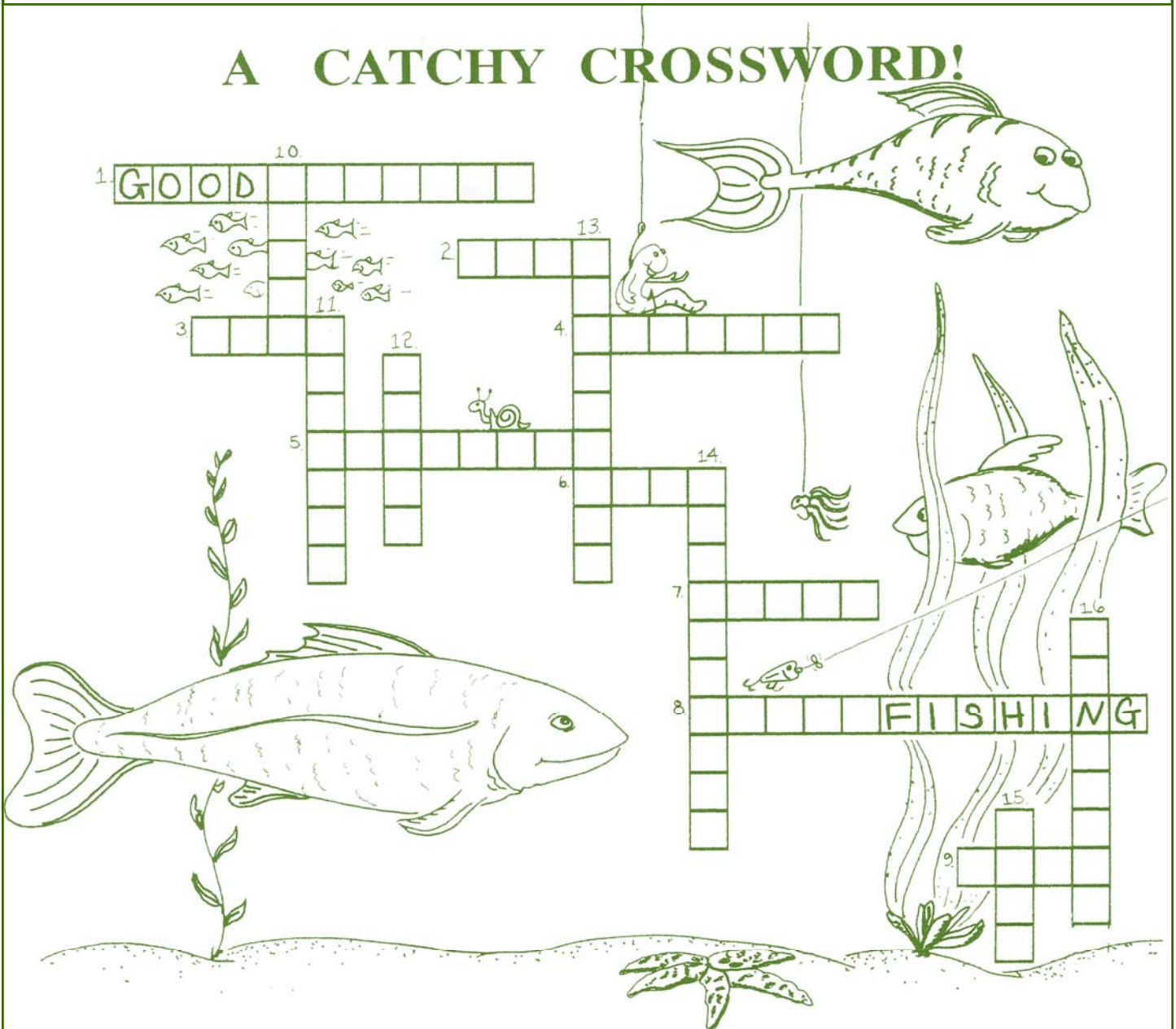
Project WET is an off-shoot of Project WILD, developed in 1995 by the Council for Environmental Education. This curriculum explores everything water-related, from a water molecule to water resource management. While there are activities for all ages K-12, the majority of the curriculum is focused on middle school and high school settings where access to a lab may be helpful. The ARE program and now the Wood-Pawcatuck Watershed Association are trained in facilitating the six-hour workshop where you will learn how to use the curriculum and effectively integrate it into your current State standards.

WOW! The Wonders of Wetlands

WOW! The Wonders of Wetlands was developed in 1995 by Environmental Concern, Inc. and The Watercourse. The curriculum is unique because it fuses classroom activities to outdoor field work. The

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A CATCHY CROSSWORD!



ACROSS

- 1) What everyone wants the day you go fishing.
- 2) Something that floats & you can fish out of it.
- 3) Largemouth _____
- 4) What you do with the rod and reel.
- 5) _____ lantern.
- 6) Moms, dads, girls, & _____ can all go fishing.
- 7) Fish use these to breath.
- 8) Eskimos fish this way
- 9) Rod and _____

DOWN

- 10) You can use this for bait.
- 11) Hook, line, and _____.
- 12) An artificial object used to catch fish.
- 13) This contains fishing equipment.
- 14) You wear these on your eyes while fishing.
- 15) Another name for seaweed.
- 16) This can be used as a fishing rod.

Kid's Corner! Presented by the Aquatic Resource Education Program

Winter is Here!

With winter comes sledding, skiing, ice skating and ice fishing. But while you are on the ice...remember a few important safety tips:

- * Never go on the ice alone!
- * **NO ICE IS SAFE:** have an adult check it first! And stay away from the edges of the pond, where there is a dock in the water, or where a tree or rock is sticking up out of the water; these places have thin ice and you may fall through.
- * Dress warm and stay dry.
- * Always bring safety items with you such as a life jacket and a first aid kit.
- * Have Fun!



Fish Scramble

Whether you are gearing up for ice fishing or for the spring Trout Season.....unscramble the fishy words below to increase your fishing fun:

RTTOU _____

TBAO _____

ATH _____

NFI _____

HISNIGF _____

SERNKSI _____

BREBOSB _____

JLFEAKTIEC _____

KELXAOCTB _____

LENACPEO _____

KSOHO _____

T B I A _____

ELER _____

ODR _____

Wild Teacher Training

by K. Sullivan cont. from page 7

curriculum is designed for K-12 and begins each activity with background information. The extensions to each activity literally bring the children out into the natural environment and aid in creating stewards of our natural resources. Training consists of three hours of classroom time and three hours in the field, learning how to take samples and identify different organisms using simple tools. The curriculum is presented to each individual once both sections of the teacher training have been completed.

Growing Up Wild

An off-shoot of Project WILD, this recently published curriculum was designed specifically for pre-school aged children. With easy, comprehensive activities, young children can connect with their natural environment at an early age. The curriculum fuses all forms of early communication such as art, music, and hands-on exploration to convey the importance of our natural resources to ages three to six. The teacher training is highly recommended and takes place in a three-hour workshop.

If you are interested in any or all of these great teacher training resources, please contact Kimberly Sullivan at kimberly.sullivan@dem.ri.gov or 401-539-7333. Watch our website for upcoming workshops: dem.ri.gov/programs/bnatres/fishwild/fwevents.htm.

Answers to Fish Scramble in order: Trout, Boat, Hat, Fin, Fishing, Sinkers, Bobbers, Lifejacket, Tacklebox, Canepole, Hooks, Bait, Reel, Rod.
 Answers to Crossword: Across: 1. Good Weather, 2. Boat, 3. Bass, 4. Casting, 5. Kerosene, 6. Boys, 7. Gills, 8. Spearrfishing, 9. Reel, Down: 10. Worms, 11. Sinkers, 12. Lures, 13. Tacklebox, 14. Sun-glasses, 15. Kelp, 16. Canepole.



Ice Fishing Safety

Ice fishing season is right around the corner and is a favorite activity among Rhode Islanders. Here are a few safety tips to help you enjoy your fishing time:

Check Ice Thickness: There is no such thing as **safe** ice. Ice thickness varies throughout pond, usually thinnest around shore and protruding objects such as rocks, trees, and docks. Check with local town authorities for ice safety at specific waterbodies.

Bring Safety Gear: Ice spikes, rope, first aid kit and a floatation device.

Stay Dry: To guard against *hypothermia*, wear proper clothing with plenty of layers. Also bring a change of clothes. Staying dry keeps you warm and prevents the onset of hypothermia. Protect your head, hands, and especially your feet with waterproof and wind gear.

Interested in learning how to ice fish? Check out current events to see when we will be offering our annual Ice Fishing workshop: dem.ri.gov/programs/bnatres/fishwild/fwevents.htm.

Stop the Spread of Didymo!

Recently regulations were promulgated that ban the use of felt-soled wading foot gear. The ban was initiated to prevent the spread of the freshwater diatom, *Didymosphenia geminata* (Alias: Didymo or "Rock Snot"), which has been found to be highly invasive in pristine streams all over the country. The microscopic freshwater alga reproduces prolifically and produces large quantities of stalk material that can cover a stream bed up to eight inches deep.

Felt-soled wading gear can harbor the diatoms and cysts, which can remain viable for weeks in the damp felt. Then the diatom can be spread by wearing contaminated gear in waterbodies that do not currently have the invader. Various cleaning methods for the felt soles are not entirely effective.

The ban extends for the 2012-2013 fishing season in all Rhode Island waters. To read the regulations, please visit www.dem.ri.gov and look under Fish and Wildlife Freshwater Fishing Regulations.



Photo: T. Daley, PA DEP

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Attention! Fluorescent Orange Requirements

All users of state management areas (e.g. hikers, cyclists, horseback riders) are required to wear 500 square inches of daylight fluorescent orange during shotgun deer season (12/3/2011 through 1/2/2012, with additional dates on Block Island in 2012). Additionally, all users of State Management Areas are required to wear 200 square inches of solid daylight fluorescent orange (generally, a baseball hat) from the third Saturday in October to the last day of February and the last Thursday in April to the last day in May.

TO:



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