

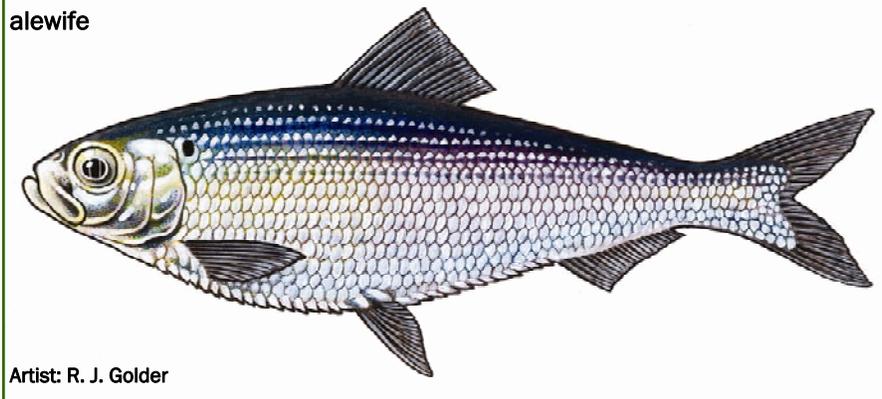


A Quarterly Publication from the Division of Fish and Wildlife, RI Department of Environmental Management

2010 Rhode Island River Herring Stock Status Update *by Phil Edwards*

March 22, 2011 marks the fifth year since Rhode Island passed regulations for the moratorium on the harvest of river herring (alewives and bluebacks). River herring are anadromous fish species which means they spend their adult lives in the ocean, returning to their native freshwater systems to spawn in the spring. Rhode Island river herring stocks are iteroparous, meaning they are repeat spawners and will return to spawn in consecutive years.

The 2006 river herring closure in Rhode Island marine and freshwaters was imposed due to drastic declines in spawning stock size, increases in mortality rates (Z), decreases in percentage of repeat spawners, and truncated age structures displayed in Rhode Island river herring stocks.



Between 2000 and 2005, the Gilbert Stuart (North Kingstown) run size decreased from 290,814 to 7,776 and the Nonquit (Tiverton) run size decreased from 230,853 to 25,417 (Figure 1). During this same time period, neighboring states Massachusetts and Connecticut also experienced declines in run sizes resulting in harvesting closures. Prior to 2006, the freshwater daily river herring limit in Rhode Island was 12 fish per day with closures on Sunday, Monday, and Tuesday and no marine regulations in place. During this time, river herring were primarily harvested for bait, but were also consumed.

Preliminary results show there has been some improvement since the closure, but current run

[Continued on page 4](#)

Inside this issue:

Species Spotlight: 3
Black Bear

Wildlife and Sportfish Restoration 5

Fighting the Vacation blues 6

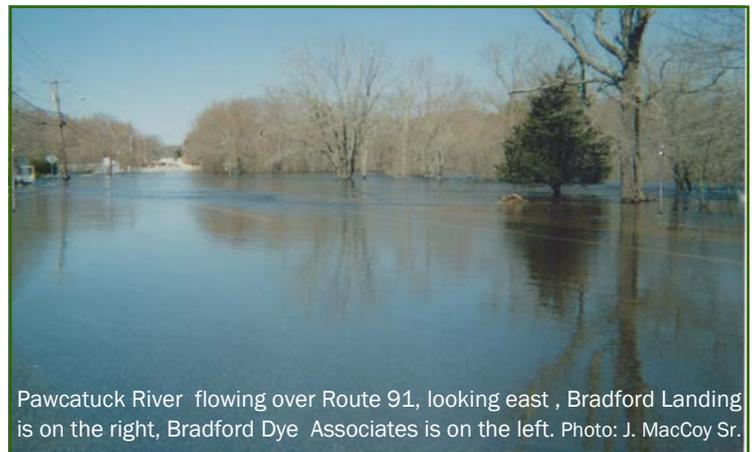
Kids Corner 7

Calendar of Events 8

Fixing the Flood of 2010 *by John MacCoy, Sr.*

This year I am writing about some of the effects of the catastrophic flood we had in March of 2010. Many of our fishing areas and road accesses to these areas were washed out by this epic storm. Over the past year the Divisions of Fish and Wildlife and Forestry have worked cooperatively together for development projects. Being so close to the opening day of fishing season we had to prioritize our repairs.

We first started with the Carolina Trout Pond. This pond is not only a family oriented place to fish but Carolina Trout Pond is the



Pawcatuck River flowing over Route 91, looking east, Bradford Landing is on the right, Bradford Dye Associates is on the left. Photo: J. MacCoy Sr.

location of a tradition for many generations of families where children and grandchildren are exposed to the sport of fishing. Our first concern was the road leading

[Continued on page 2](#)

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.



Janet Coit, Director
Rhode Island Department of
Environmental Management

Larry Mouradjian,
Associate Director,
Bureau of Natural Resources

Wild Rhode Island is a quarterly publication of the Rhode Island Department of Environmental Management Division of Fish and Wildlife. Printing is supported by the Aquatic Resource Education program (Federal Aid Grant F-42-E).

Publisher: Kimberly Sullivan,
Principal Fisheries Biologist,
ARE Coordinator

Editor: Veronica Masson,
Principal Fisheries Biologist

For a free subscription to *Wild Rhode Island* please call (401) 789-0281 or send an email to veronica.masson@dem.ri.gov. Please indicate whether you would like to have the newsletter sent to you via email or US mail.

Wild Rhode Island is also available on the web at:
www.dem.ri.gov

To report an environmental emergency or violation please call the RIDEM Division of Law Enforcement (401) 222-3070

Fixing the Flood of 2010 by John MacCoy, Sr. cont. from pg. 1

to the trout pond. In places the washouts were up to six feet wide and four feet deep. On the road, 60 tons of rip-rap stone and 120 tons of processed gravel were used. We started the road repair at 7:30 am and worked until dark to enable cars to pass. The next day we finished by grading the road.

The next hurdle at the trout pond was the major wash-out caused by the pond overflowing the banks. This in turn caused a wash-out measuring about 100 feet long, in places 30 feet wide and six feet deep. The only thing we could do is make a safe passageway through the wash-out so the public could access the pond. Using the bobcat, we cut a walkway through the wash-out so the public could safely walk to the other end of the pond. See pictures of the fence installation along with James Pendlebury up to his neck, which gives you an idea how deep the wash-out was.

Many other places were affected by the storm including the boat ramp and parking lot at Watchaug Pond. The parking lot was completely under the water, which reached to the road. The restoration of the parking lot required about 30 tons of gravel.

At Bradford Landing the Pawcatuck River came across Route 91 and went through the property of the Bradford Mill, which is located across the street from our boat ramp access. The river completely knocked over the mill owners fence. In the parking lot at the Division of Fish and Wildlife boat ramp at Bradford Landing, there was a large sink hole caused by the river overflowing its banks. It took about 60 tons of rip-rap stone to fill this hole.

While we hope not to have a repeat of the floods of 2010, with the spring rains coming the development crew of the Division of Fish and Wildlife is ready to repair whatever is necessary to make sure that Opening Day of trout season is a success.

Road repair at Carolina Trout Pond.



All photos by J. MacCoy

Species Spotlight: Black Bear *by Charles Brown*

After an absence of more than 200 years, the report of a black bear sighting in Rhode Island today is enough to bring out reporters from all the local television and newspaper outlets, hoping to get the scoop on the whereabouts of this large and impressive, yet shy and elusive animal. Whether it will still be “breaking news” a few years from now remains to be seen as bear sightings become more commonplace in our state.

The American black bear (*Ursus americanus*) originally ranged throughout all of the forested portions of North America including all of what is now known as New England. It is the only species of bear that occurs in the eastern United States. Historical records are scarce but it is likely that bears were extirpated (became locally extinct) from Rhode Island sometime before 1800. The clearing of land for agriculture and other uses along with unregulated persecution and harvest pushed the remaining populations into the most remote and undisturbed parts of New England and North America. Colonists considered bears pests of agricultural crops and a danger to livestock and routinely shot bears on site in the era before game laws and management agencies were in place. In “The Mammals of Rhode Island” authors John Cronan and Albert Brooks recount one historical record from October 14, 1734 of a bear shot in Barrington by the local parson. According to the parson, the bear weighed 187 ¼ lbs and “was sold for two pounds, 8 shillings, five pence... and I was cheated out of every farthing.”

After several centuries of population declines and range constriction, black bear populations today are increasing in many areas and beginning to reoccupy some of their former range. As former agricultural lands in the northeast revert back to forest, they have the potential to become bear habitat. Today, bears are managed and protected as game animals, with harvest strictly regulated or prohibited. Bear populations in Massachusetts and Connecticut are increasing at rates estimated to be seven to eight percent per year. Once considered to be intolerant of human activity, bears are now known to be able to live in close proximity to people, but not always without problems.

Bears belong to the mammal order Carnivora, but they are omnivorous in the true sense of the word. They are not built for stalking and pursuit, lacking the necessary speed and agility for preying on adult animals. Insects and insect larvae make up a significant portion of their diet, and they will scavenge dead animals (carrion) as well. Fruits, vegetation, and nuts are also a major component of a bear’s diet.

In spring, bears will eat grasses and the leaves, buds, and tubers of a variety of plants. Blueberries, blackberries, and other fruits are highly sought after during the summer. In the fall, acorns and other mast crops such as beech nuts are eaten in large quantities. In poor mast years bears will often move great distances in search of available foods. Black

bears are excellent climbers and will readily climb trees to collect nuts or to escape danger.

Black bears lead mostly solitary lives with the exception of females with cubs or coming together to mate. Adult bears are territorial, and may defend their territories from intrusions by other unwelcome bears. Adult females may have territories of 2 to 6 square miles, while the territories of adult males are much larger, often encompassing the territories of a number of adult females. Bears have a complex social organization and use scent and visual markings such as biting and clawing trees to convey messages such as territorial boundaries, identity, and reproductive status. Bears vocalize in a number of ways but not by loud growls as often depicted in television programs and movies. They use various grunts, blowing bursts of air through their nostrils or clacking of their teeth to convey moods such as pleasure, pain, nervousness, or fear.

In this way, bears avoid altercations with other bears. Bears will sometimes bluff charge or stamp the ground with their front feet if they feel threatened or are approached too closely, but rarely follow through with an attack.

As an adaptation to living through periods of food scarcity, bears hibernate in some parts of their range. Cold weather is not as much of a factor as their den sites are often as cold as their surroundings. Bears may use hollow trees, small caves, brush piles, or simply a low spot on the ground to hibernate. They gather leaves, grasses, moss, or other materials to sleep on. They reduce their metabolism by half, lowering their heart rate and body temperature. They are able to maintain their body temperature at a level at which they can respond to danger or nurse or tend to cubs because of their thick fur and fat accumulated during the fall. Bears do not eat, drink, or defecate while they are hibernating. If disturbed, bears can arouse quickly from hibernation.

Breeding season for bears occurs in June or early July, with adult male bears competing for rights to breed with as many females as possible. Female bears will generally not breed before they are at least three or four years old. Males will usually not achieve enough “status” to breed until they are much older. Adult females breed



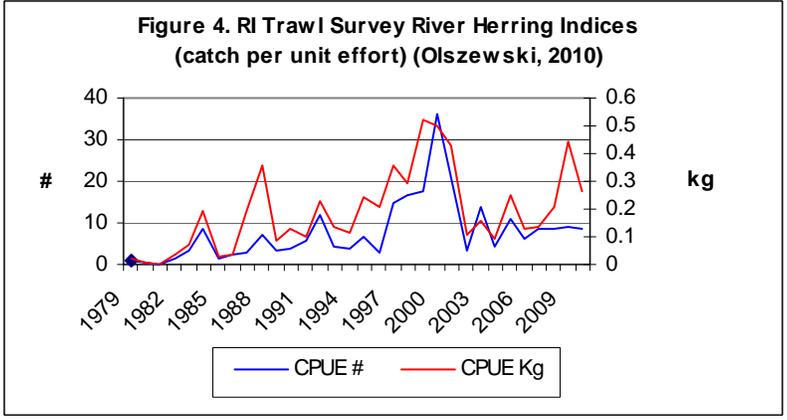
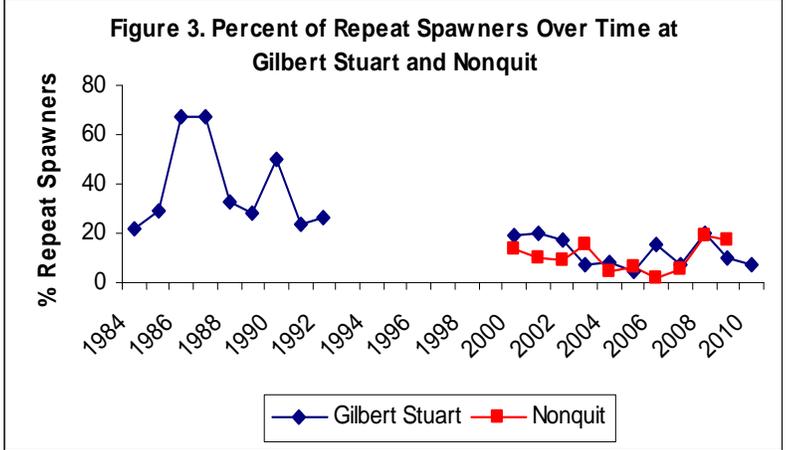
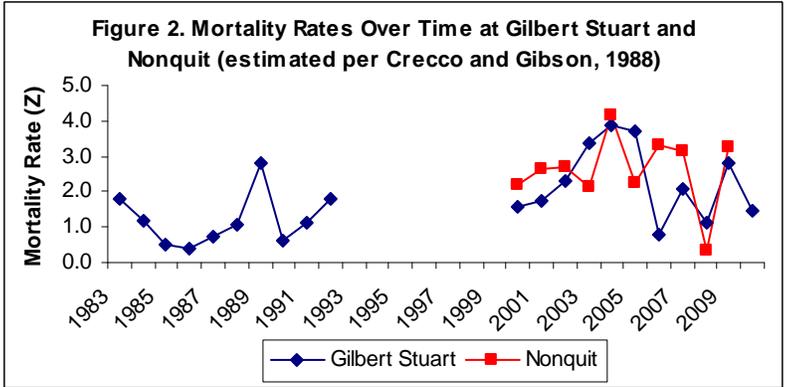
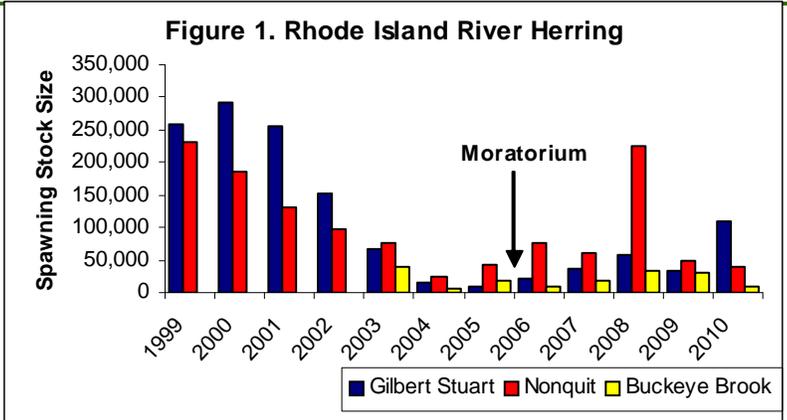
Photo: USFWS

2010 Rhode Island River Herring Update *by Phil Edwards continued from page 1*

sizes are still well below the estimated run sizes recorded prior to the decline during the 1999 to 2001 time period. Using three year averages and comparing the 2004 to 2006 time frame with the 2008 to 2010 period, the average run size at Gilbert Stuart increased from 14,965 to 67,921 and the Nonquit run size also increased from 47,504 to 104,288. Likewise mortality rates (Figure 2) and the percentage of repeat spawners (Figure 3) have shown some improvement.

Currently, the RI river herring moratorium will continue through 2011. Towards a restoration goal, the Division of Fish and Wildlife will continue to monitor runs throughout the state, transplant adult broodstock into extirpated or restored systems, work with partners on numerous fish passage projects, and represent the state at regional meetings. The Division has monitored run sizes at the Gilbert Stuart fishway since 1981 and Nonquit fishway since 1999 using various methods including electronic fish counters and direct count methods. In 2003, volunteers from the Buckeye Brook Coalition in Warwick began conducting direct counts to monitor run sizes, and in 2010, the Woonasquatucket and Hunt River watershed volunteers initiated direct count surveys on their river systems. The Division anticipates these new estimates will be important in developing recommendations for future river herring regulations. Juvenile river herring are also monitored as they are exiting freshwater systems and the marine section monitors juveniles and adult river herring in marine waters. Marine time series surveys include the RI Trawl Survey (since 1979), the Narragansett Bay Seine Survey (since 1988), and the RI Coastal Pond Survey (since 1993) (Figure 4).

There are many theories for the drastic decline in run sizes prior to 2006, including overfishing, an increase in predators, an ocean by-catch fishery and loss of freshwater nursery and spawning habitat. Many state and federal agencies, marine fishery councils, and private organizations are looking at a variety of issues, and considering future management measures to protect river herring stocks. In addition, ASMFC Amendment 2 (2009) of the River Herring FMP will require states to submit an approved sustainability plan for recreational and commercial river herring fisheries. States that do not provide approved plans will have to close their river herring fisheries on January 1, 2012. Currently Rhode Island, Massachusetts, Connecticut and North Carolina have river herring moratoria in place.



The Wildlife and Sportfish Restoration Program by Najih Lazar and Veronica Masson

The wide variety of programs in the Division of Fish and Wildlife are primarily funded from two federal programs collectively called Wildlife and Sportfish Restoration (WSFR). These grant programs are managed by the U. S. Fish and Wildlife Service. The WSFR program is unlike any other in the world and has allowed sportmen and women to protect and manage the natural resources of states and territories. This benefits not only hunting, fishing and boating, but also all other recreational uses. In Rhode Island this federal funding has been used for a variety of projects and programs. Following is a description of the how the funding is generated, dispersed to us and spent.

The WSFR program is divided in two sections; these are the Wildlife Restoration (Pittman Robertson Act) and the Sportfish Restoration (Wallop-Breaux/Dingell Johnson Act - WB/DJ). There are strict federal guidelines regarding the use of funds.

The Federal Aid in Wildlife Restoration Act or "Pittman-Robertson Act" has been amended several times, and provides funding to States for management and restoration of wild game species. Funds from an 11 percent excise tax on sporting arms and ammunition are appropriated to the Secretary of the Interior and apportioned to States on a formula basis. Project activities supported by Wildlife Restoration funding include acquisition, maintenance and improvement of wildlife habitat; introduction of wildlife into suitable habitat, research, surveys, inventories and management of wild game species, acquisition and development of access facilities for public use, and hunter education programs, including construction and operation of public target ranges.

The Sportfish Restoration program (WB/DJ) is funded by an excise tax on the purchase of fishing equipment and motorboat fuel. Each state receives a share annually, based 60 percent on its licensed anglers and 40 percent on its land and water area. No state receives more than 5 percent or less



Photo: USFWS

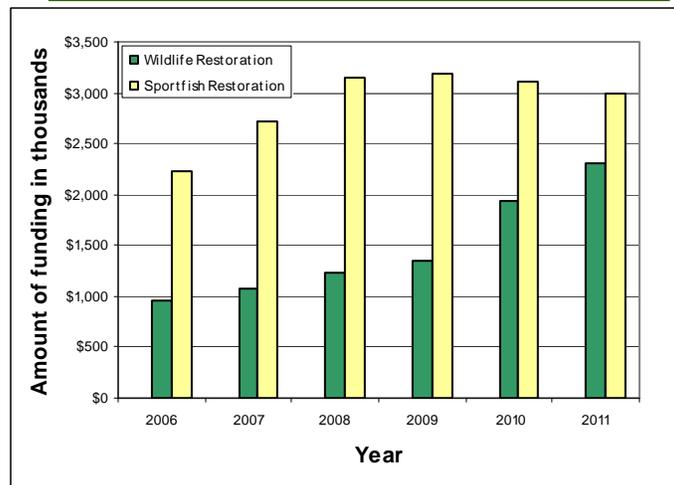


Photo: USFWS

than 1 percent of each year's total apportionment. Rhode Island is considered a minimum state and receives the minimum 1% of the total, along with several other states. The Act requires states to allocate at least 15% of their apportioned funds for acquiring, developing, or improving facilities for public access for recreational boating purposes. In addition, states may use up to 10 % of apportioned funds for aquatic education.

The Division utilizes the Sportfish Restoration funds to support a number of research and monitoring projects. These include marine recreational finfish surveys, freshwater fisheries research, anadromous fisheries restoration, the trout hatcheries, boating access infrastructure and maintenance. In addition, aquatic education programs offer Rhode Islanders a chance to become stewards of their waterways through a variety of training workshops.

The programs use a cost-reimbursement method, where the state covers the full amount of an approved project then applies for reimbursement through WSFR for up to 75% of the project expenses. The state must match at least 25% of the project costs from a non-federal source. The Division of Fish and Wildlife provides the matching funds from revenues of the sale of licenses for hunting, freshwater fishing, commercial shell-fishing, and recently saltwater fishing. Each year we are allo-

ated a certain set amount of funding. In 2009, about 69% of the Division of Fish and Wildlife's costs were charged to federal aid, 23% of program costs were charged to license receipt accounts, and the remaining 9% was charged to the state general fund account.

The Division takes the responsibility of using these funds to provide excellent hunting, angling and boating opportunities very seriously. We try our best to make these opportunities available to our constituents and also consider the other recreational users of our facilities.

Fighting the Vacation Blues *by Kimberly Sullivan*

February vacation can be a tough time for kids to be home from school: in this economy some activities are too expensive, it's too cold to be outdoors for very long, and everyone goes stir crazy if they are confined to the house the whole time. Well, this year the Department of Environmental Management worked on ideas to alleviate some of those winter blues. The Division of Fish and Wildlife offered Rhode Islanders the opportunity to visit the Lafayette Trout Hatchery in North Kingstown.



Located off the beaten path, the Lafayette Trout Hatchery is our most modern hatchery, equipped with a new hatch house, cement raceways, and a conference room. The hatchery raises four different types of trout. During the Tuesday and Thursday of February vacation week, the hatchery was open between 10am and 2pm and offered a variety of activities including tours of the hatch house, where all the young fry are raised, feeding the large fish outside in our production



Photos: S. Pendegraph

line and making a fishy craft project. The event was a success and over 350 people from all over Rhode Island came to visit and learn about the fish and the hatchery.

Due to the success of this program, the DEM will be offering other fun and educational opportunities during the April vacation week as well. Activities will include another hatchery tour at Lafayette Trout Hatchery, a Marine Ecology program at Jerusalem Coastal Lab facilities in

South Kingstown, and a Learn-To-Fish program at the Aquatic Resource Education Pond at our Carolina Trout Hatchery. Check back periodically for exact dates and other DEM events offered throughout vacation and the year: www.dem.ri.gov. For more information on these programs and scheduling group tours, please contact Kimberly Sullivan, ARE Coordinator, at Kimberly.sullivan@dem.ri.gov or 401-539-7333.

Species Spotlight: Black Bear *by Charles Brown*

continued from page 3

every other year, the cubs staying with their mother until they are one and a half years old. Cubs are born in the den during January. They weigh less than a pound and are born altricial, meaning they are hairless, helpless, and with their eyes closed at birth. The average litter is two but may be more or less depending on the age and health of the female. Bear cubs will weigh about three to 10 pounds by the time they leave the den in the spring. Bear mothers will teach their cubs what foods are good to eat, where and when to find them and what dangers to avoid. Bears are highly intelligent and remember where predictable food sources will be. Cubs will spend the following winter with their mother. When the cubs are 16 to 17 months old they will either leave on their own or be encouraged to leave by their mother as she prepares to breed again. Young females will typically stay close to their mother, often establishing sub-territories within or adjacent to her territory. Young males however often travel great distances, sometimes more than 100 miles in search of unoccupied territory. It is the young males that will be the first to re-colonize new areas such as Rhode Island.

The return of bears to Rhode Island and other parts of their historic range should be viewed as a wildlife success story. However, there are a number of management issues that state wildlife agencies must contend with as bears move back into areas from which they were long absent. In some parts of their range loss of habitat remains a significant concern for the long term viability of bear populations. Bears come into conflict with humans when they are attracted to human-related food sources such as bird feeders, garbage, pet food, bee hives, livestock, and agricultural crops. Residents in areas where bears occur can take steps to minimize

the potential for conflicts with black bears. Properly securing livestock feed, garbage, and other potential food sources will prevent many problems from occurring. The use of electric fencing can be effective in preventing damage to apiaries or attacks on livestock. Bird feeders should be taken down in April and not put up until November or made completely inaccessible to avoid attracting bears into backyards. Bird seed is high in fat and protein content, which is often lacking in a bear's normal diet making feeders an attractive target. Never intentionally feed bears. It is illegal to intentionally feed bears in Rhode Island. Those that are fed by humans almost always will become nuisances to other property owners and not be tolerated.

The likelihood of a black bear attacking a human is extremely low. Bears are typically shy, reclusive animals and will normally avoid contact with people. Given an opportunity, a bear would rather retreat than confront a person. In 2002, the Department adopted a Policy Regarding Problem Black Bears. The intent of the policy is to establish guidelines for Department personnel responding to various situations involving black bears that develop nuisance or destructive behaviors. Public education is major component of the plan, the goal being to prevent problems from occurring.

We have habitat in Rhode Island capable of supporting bears. The future of black bears will depend on public attitude and actions as much as suitable habitat. We can, as have residents of the other five New England states, learn to coexist with bears and enjoy this wildlife success story.

To keep track of bear activity, report bear sightings to the Division of Fish and Wildlife at 789-0281.

Kids Corner! Presented by the Aquatic Resource Education Program

Fishing Word Search

Every year the Division of Fish and Wildlife releases over 180,000 fish into Rhode Island's ponds, rivers and streams across the state. Why? The main reason is to provide the fishermen and women a chance to catch fish without over-fishing our native populations. There are 3 different types of trout released yearly - brook, rainbow, and brown trout- which are raised in our State hatcheries. Recently, we have been raising another type of trout called the golden trout. This fish is only stocked at the hatchery's Free Fishing Day held on May 7th of this year. Would you like to know where you will be able to fish for this special trout? Simply finish the Fishing Word Search below and write down, in order, any letters that have not been circled on the lines below the word search.

K	I	D	S	P	O	N	D	S	F	R	B	E
N	B	B	R	O	W	N	E	F	I	S	L	H
O	L	A	A	I	Y	R	E	H	C	T	A	H
R	U	S	I	N	G	E	E	O	N	A	C	S
T	E	S	N	L	F	V	B	R	O	O	K	I
H	G	T	B	T	I	A	B	O	E	N	C	F
E	I	O	O	T	S	R	A	D	A	T	R	Y
R	L	C	W	R	H	R	P	S	O	T	A	L
N	L	K	U	N	I	D	T	A	O	P	P	F
P	D	E	E	S	N	I	K	P	M	U	P	R
I	P	D	O	N	G	O	L	D	E	N	I	E
K	A	Y	A	K	W	O	N	N	I	M	E	S
E	D	O	P	E	N	I	N	G	D	A	Y	H

OPENING DAY

APRIL

BLACK CRAPPIE

BASS

RAINBOW

BROOK

BROWN

NORTHERN PIKE

BLUEGILL

PUMPKINSEED

FISHING

BAIT

RODS

HATCHERY

FLYFISH

GOLDEN

BOAT

CANOE

KAYAK

KIDS PONDS

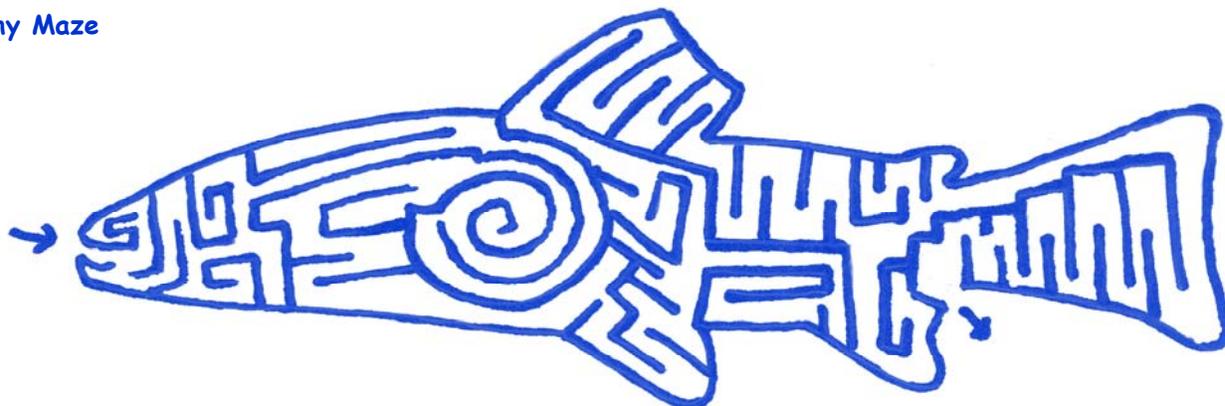
STOCKED

MINNOW

FRESH

Answer on page 8

A Fishy Maze



Calendar April–June 2011

March 29 and 30, 7pm - Public Workshops on proposed hunting, freshwater fishing, parks and management area regulations. Respective locations are RIDEM Headquarters in Providence and Tiverton Rod and Gun Club. Check www.dem.ri.gov for more info.

April 9, Opening Day of Trout Season!

April 18-22 - DEM April Vacation Events. More info at www.dem.ri.gov.

April 30 - Introduction to Freshwater Fly fishing, registration required, contact Kimberly.sullivan@dem.ri.gov or 401-539-7333.

May 2, 11 and 15 - USFWS and ARE program sponsor 'Flyfishing the Wormhatch' at Kettle Pond Visitors Center. Contact Charles Burlington at 401-364-9125 for more information.

May 7 - Free Fishing Event at Round Top Ponds 9am-2pm includes fish stocking, raffle, free fishing (no license or trout stamp required), bait, and loaner fishing rods.

May 7 & 8 - Free Fishing Weekend State-wide, No license or trout stamp required.

May 22 - Great Outdoors Pursuit Kick-Off at Lincoln Woods for more information please call (401)222-2632 or visit www.riparks.com.

Ongoing—Hunter and Bowhunter Education These courses are ongoing. Please check www.dem.ri.gov for schedules and information.

June 1, 7pm—Public Hearing on proposed hunting, freshwater fishing, parks and management area regulations. See www.dem.ri.gov for more information.

OPENING DAY!

Don't forget, Opening Day of trout fishing is April 9, 2011! Free Fishing Weekend is May 7 and 8. Bring your mom fishing!



Play the Rhode Island Great Outdoors Pursuit!

Decipher clues, visit beautiful State parks and forests, join in fun activities, and win great prizes!

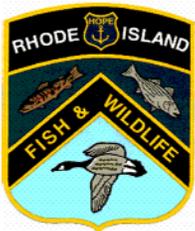


Don't miss out—sign up TODAY!
Visit www.riparks.com
or call (401) 222-2632



Answer to word search question: FREE FISHING EVENT AT ROUND TOP PONDS

This program receives Federal funds from the U.S. Fish and Wildlife Service. Regulations of the U.S. Department of the Interior strictly prohibit unlawful discrimination in departmental Federally Assisted Programs on the basis of race, color, national origin or ancestry, gender, sexual orientation, age, or disability. Any person who believes he or she has been discriminated against in this program, activity, or facility operated by this recipient of Federal assistance should write to: The Office for Equal Opportunity, U. S. Department of the Interior, Office of the Secretary, Washington, D. C. 20240



Wild Rhode Island

A Quarterly Publication from the Division of Fish and Wildlife

Great Swamp Field
4808 Tower Hill Road
Wakefield, RI 02879
(401) 789-3094 TTD 711

Attention! Fluorescent Orange Requirements

This spring all users of State Management Areas are required to wear 200 square inches of solid daylight fluorescent orange (generally, a baseball hat) from the last Thursday in April to the last day in May.

TO:



Wild Rhode Island
is printed on 100% recycled paper