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Summer 2012

Wild Rhode Island

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

The Narragansett Bay Tautog Fishery *by Jason McNamee*


Jack McNamee with an October keeper.
Photo: D. Costa

Tautog (*Tautoga onitis*) are a stout, medium sized fish species that seasonally migrates into Narragansett Bay during the spring to spawn. They migrate in from their overwintering locations off of the Rhode Island coast, and tagging studies indicate that they never venture too far from state waters. Tautog (also called blackfish or tog) are one of the few species that reside almost their entire lives in and around state waters, making them a truly local species. Tautog play a very important role in Narragansett Bay's ecosystem by serving as an important predator on many species of shellfish and crustaceans such as blue mussels and green crabs. Once tautog have completed their spawning cycle, they begin to seek out their preferred habitat; structures such as rocky reefs and shipwrecks, (Chenoweth, 1963; Cooper, 1967; Lynch, 1993).

The current coastwide stock status of tautog is that the stock is overfished (ASMFC 2011). The term "overfished" means that the number of fish currently existing in the population is not enough to ensure that the population is sustainable, or that there are enough fish to produce a population of equal or greater size in the following years. The term "overfishing is occurring" means that fishery removals are higher than a level that will allow the population size to grow and to remain at sustainable levels. Due to this finding the states are working collaboratively through the Atlantic States Marine Fisheries Commission (ASMFC) to address these concerns. One important difference for tautog, which is a very unique circumstance relative to how other fisher-

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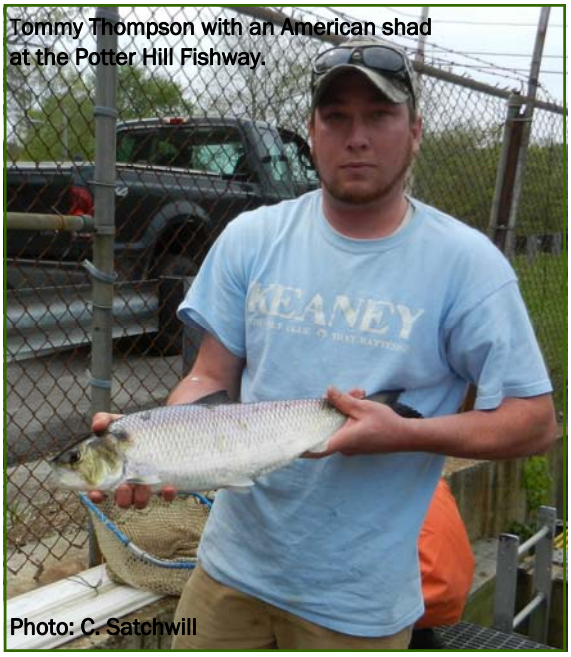
Inside this issue:

American Shad Restoration *by Phil Edwards*

Between 1975 and 1985 the Division stocked over 24,000 adult American shad from the Connecticut River to the Pawcatuck River in an effort to restore American shad populations. Throughout the 1980s and 1990s the stocking efforts paid off with large numbers of American shad returning each spring to the Pawcatuck River. Transplanting of shad was discontinued in 1985, and the Pawcatuck River shad populations were considered self-sustaining. As with Rhode Island river herring stocks, the American shad numbers on the Pawcatuck River began to decline in the early 2000s and have been at low levels since 2005. In an attempt to supplement the existing diminished American shad returns to the Pawcatuck River, the Division began restocking adult shad in 2009 and initiated a fry stocking program in 2010.

Since 2009, the

Continued on page 2


Tommy Thompson with an American shad at the Potter Hill Fishway.
Photo: C. Satchwill

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

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American Shad Restoration *by Phil Edwards*

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Loading adult American shad at the Holyoke Fish lift on the Connecticut River.

Photo: P. McGee

Connecticut River Atlantic Salmon Commission has allocated adult American shad broodstock from the Connecticut River to Rhode Island Fish & Wildlife for release into the Pawcatuck River. Each spring, Division staff transplant shad from the Holyoke fish lift to the Pawcatuck River. The fish lift is operated throughout the day and fish lift personnel sort the shad into a holding tank. As tank trucks arrive, the shad are released from the holding tanks into the tank trucks via a chute. The 1,000 gallon tank truck has pumps that circulate the water, dissolved oxygen diffusers, and is treated with a salt mixture prior to loading water. The adults are transported in the tank truck and released into the Pawcatuck River, where they spawn. The eggs hatch in 10 to 14 days and the fry from the newly hatched eggs are now imprinted to the Pawcatuck River system. The juvenile shad spend the summer in the Pawcatuck River and exit to marine waters in the fall. After three to five years in the ocean, the adults return to the Pawcatuck River to spawn and repeat the cycle.

In 2010, the Division partnered with USFWS North Attleboro Fish Hatchery and began an American shad fry stocking program. In the spring, adult shad are transported to the hatchery where they swim and spawn naturally in large holding tanks and the fertilized eggs are collected by an egg collection device. The live shad eggs are sorted, cleaned, and then held in outside hatching tanks. After hatching, the fry are marked, the hatching tanks are placed on a trailer by a fork lift, and the fry are transplanted to the Pawcatuck River. During the transfer the USFWS hatchery staff circulates water from the Pawcatuck River into the flow through hatching tanks to acclimate the water temperatures. After about 20 minutes of mixing the water, the fry are released into the Pawcatuck River. Typically, the fry are released at about 10 to 14 days old when they are approximately 10 to 12mm in length. Throughout the summer, the fry feed and grow in the Pawcatuck River, becoming imprinted to the new system.

In addition to the shad stocking activities, RIDEM has worked with WPWA, NOAA, and numerous other partners on Pawcatuck River fish passage projects that benefit American shad by allowing them access to previously blocked spawning and nursery habitat. Both of the American shad restoration stocking activities described above are planned for the Pawcatuck River in 2012 and in future years. Currently there are numerous new anadromous fish restoration projects being constructed throughout the state and include the construction of new fishways and dam removals. Therefore, the Division anticipates expanding the American shad restoration stocking programs to other Rhode Island river systems in the near future.

The Narragansett Bay Tautog Fishery *by Jason McNamee*

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ies are managed, is that Rhode Island and Massachusetts are authorized to run a regional stock assessment. This assessment uses the same protocol and software as the coastwide assessment, but only uses RI and MA data in the analysis. There are several reasons for running this regional assessment, including the instate migration patterns already mentioned, similarities in the fisheries between RI and MA, and similarities in the regulations governing the fisheries in these two states. The findings of this local assessment are different than the coastwide assessment. In the regional assessment overfishing is not occurring, but even given this, the stock is still considered to be in an overfished state. Because of a number of proactive regulatory changes in recent years by RI and MA, including a complete closure of the fishery during the majority of the spawning season in RI, RI and MA were not required to make any major changes to their management of tautog , while all other states with tautog fisheries had to take some significant reductions in their 2012 fishing seasons.

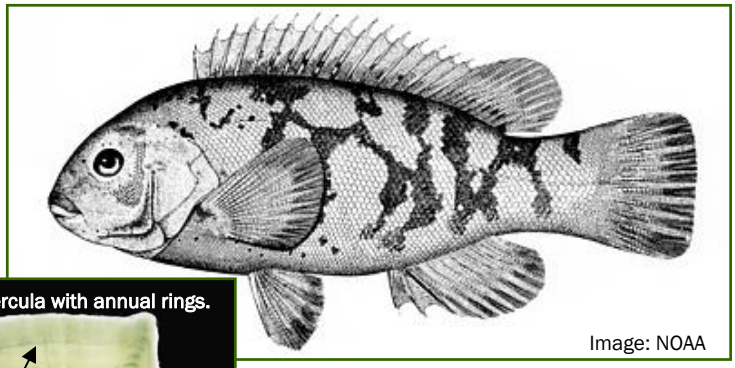

Image: NOAA

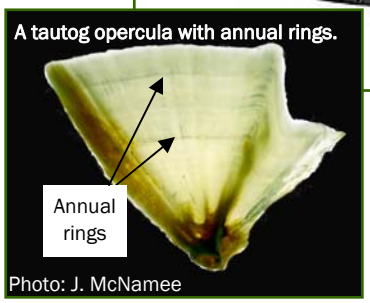

Photo: J. McNamee

Both recreational and commercial fisheries occur on tautog in Narragansett Bay and in RI coastal waters in the spring, summer, and fall. The main commercial fishery is prosecuted by small scale rod and reel fishermen with some catch also occurring by otter trawl, floating fish trap, and fish pot gear types. A commercial quota is set for tautog to constrain harvest to within an amount that would allow the species to be sustainably harvested and this quota is broken into three sub periods, each of which has its own unique characteristics as far as the user groups participating in the fishery. Once the quota is harvested, the commercial fishery is closed for the season. The commercial quota for tautog is not at a level where a fishery could be open for an entire year.

On the recreational side of things, sport fishermen are responsible for the vast majority of the harvest on this species representing upwards of 90% of all harvest on this species in RI. They are commonly caught by live bait bottom fishing, where a hook is baited with a fresh green crab and cast in to an area where there is structure such as a rocky reef. Recreational fishermen prize tautog as a food fish for its white flaky fillets, but tautog can also put up a significant fight as they are a stout and powerful fish, so are actively pursued by sport fishermen as well as food fishermen.

Management of tautog in RI waters is a story of collaboration between the RI Division of Fish and Wildlife (hereafter Division) scientists and local recreational fishermen. One of the major sources of data used for the tautog stock assessment is age information, which is derived from the operculum (the large boney cheek) of the tautog. The opercular bone is removed from the fish and boiled to remove the skin and flesh, and then rings on the bones are counted, similar to what is done for aging trees by counting the rings in the trunk, to judge the age of the fish (see photo). The source of these opercular bones is from volunteer recreational fishermen who work in collaboration with the Division to harvest tautog during the fall at many different sizes in an effort to get a full sample of the size at age information for this species. This age-length information is then used to calculate the age of the fish captured in the various surveys that are used to inform the regional stock assessment, such as the Division's fishery independent trawl survey.

Aside from the collaboration with recreational fishermen on the collection of important data for the stock assessment, the recreational representatives on the State's Marine Fisheries Council and its associated advisory panels have been a driving force behind the proactive and conservation-minded regulations that have been administered in the state. Beginning in 1996 with the first management plans on this species, RI recreational fishermen have always been progressive in their approach to tautog management, being one of the first states to implement a 16" minimum size to protect older spawning fish, and the first to enact a spawning closure for this species. It was this progressive and proactive strategy that has paid dividends to RI fishermen by allowing RI to forgo the onerous restrictions that have occurred for this year in other states.

In the coming years it is hoped that by the protection of spawning fish and maintaining harvest at sustainable levels, we will begin to see a rebound in the population of this species, a species that is truly a RI native. Tautog are a long lived, slow growing species, so require a fair amount of conservation in order to protect them. These biological characteristics mean that a recuperation can be slower than for other species of importance to the state, but through continued monitoring and future efforts, we hope to rebuild this stock back to historical levels for the use and enjoyment of anglers now and into the future.

References

Atlantic States Marine Fisheries Commission. 2011. 2011 Tautog Assessment Update Summary. 10 pp. http://www.asmfc.org/speciesDocuments/tautog/annualreports/stockAssessments/2011TautogAssessmentUpdateSummary.pdf

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American Woodcock *by Brian Tefft*

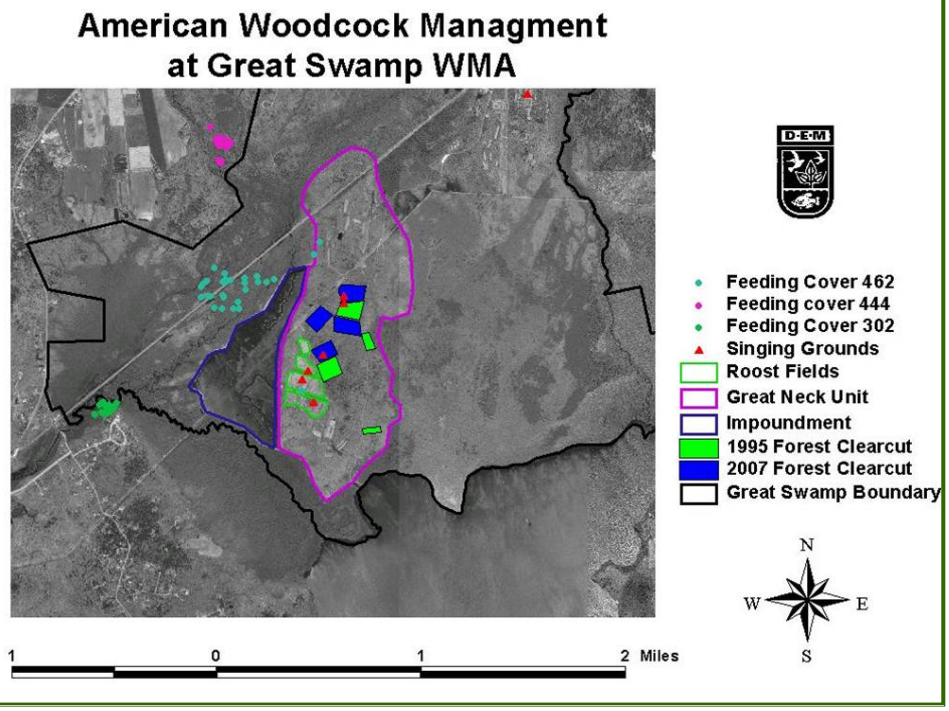

Photo: G. Krause

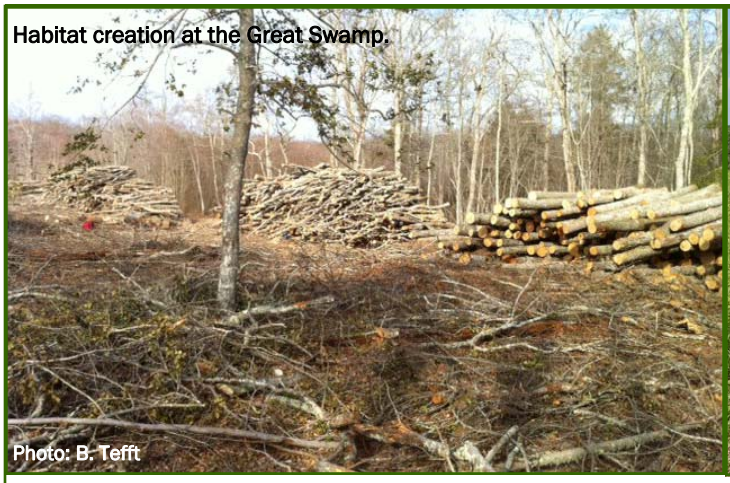
The American Woodcock *(Scolopax minor)* is a small migratory upland shorebird that inhabits the eastern half of North America. The woodcock spends most of its time in the thickets of moist young upland forests, also referred to as early successional habitats. It uses the benefit of its cryptic brown camouflaged feathers and large eyes, situated on the top of its head, to hide from predators. The bird is considered a habitat specialist because it needs young regenerating forest thickets adjacent to small openings or fields for courtship in order to thrive. Unfortunately, this type of habitat has declined in Rhode Island and throughout the woodcock's range as forests have matured, been converted to commercial or residential developments and farming practices have been modified to maximize production by removing hedgerows and fallow fields.

Biologists have monitored woodcock populations intensively since the 1960s using singing ground surveys. The results show that woodcock populations have declined at a rate of approximately 1% per year since that time. Recently, biologists have been tracking similar population declines in many other common song bird species that use and require similar thicket habitats, resulting in calls to action to improve habitat management for these species. The woodcock is often referred to as an umbrella species, which means that managing its habitat will help provide for the habitats of other species with similar requirements. At least 50 other wildlife species have been documented as requiring habitats similar to the woodcock. The New England cottontail will also benefit from habitat management. This native rabbit species has been designated a candidate species for Federal Listing and is a high profile mammal species that also uses young thicket habitats occupied by woodcock. It is vitally important to restore sufficient acreage of young forest habitats in order to stop the decline in woodcock populations and other similar species.

The DEM Division of Fish and Wildlife has taken the lead role in managing habitats for woodcock. Over the past 17 years, the Division has developed habitat demonstration areas at the Great Swamp, Arcadia and Big River Management Areas. The habitat demonstration areas were developed for three reasons; to provide habitat for the birds, to provide educational opportunities for forest landowners to observe best management practices, and to conduct research that will evaluate the woodcock response to habitat management. The Great Swamp demonstration area consists of 600 acres of forest and meadows and contains 60 areas of forest that have been clear cut at a rate of 20 acres every five years, since 1995. These regular clear cuts provide a constant supply of habitat for the bird over time.

The involvement of private forest landowners in the project to restore early successional habitats and young forests for woodcocks and other wildlife is critical since these pri-




Habitat creation at the Great Swamp.
Photo: B. Tefft


Singing ground.
Photo: B. Tefft

vate owners own and control approximately 80% of the forested habitats in the state. Any program to restore sufficient acreages of young forest habitats must involve these landowners to be successful. In addition to the habitat demonstration areas, DEM and its partners including the Natural Resources Conservation Service (CRMC), University of Rhode Island (URI) and RI Forest Conservators have annually held COVERTS Workshops to help teach forest landowners about the needs of species requiring young forest habitats, including woodcock and ruffed grouse, and how to manage habitats for them.

Habitat requirements for the woodcock can be categorized in four main areas. Singing grounds are open areas that woodcock use to conduct courtship displays, and include clear cuts, natural forest openings, and abandoned pastures. Nesting and brood rearing habitats consist of young forest thickets and dense shrub habitats that provide the bird concealment and protection from predators during the incubation and brood rearing period. Diurnal covers are habitats where woodcock spend most of the daylight hours engaged in feeding, since these habitats are often situated on rich moist soils that supply the primary food of the woodcock; earthworms and other small insects. The final component of the birds' habitat consists of larger open meadows or recent clear cuts where the birds fly to spend the night roosting on the ground, attempting to avoid night predators.

Measuring the woodcock response to habitat management is a major component of the research work being conducted by DEM and URI at the demonstration areas. In 2008, a pilot research study was developed from a small grant received from the Wildlife Management Institute that sought to measure response to habitat management. Over the next two years, 18 woodcock were captured in mist nets and fitted with radio transmitters that allowed tracking of the birds' movements and habitat use during the spring and summer months at the Great Swamp. We also measured the response of other birds that used the habitats restored at Great Swamp. Beginning in 2010 the project was expanded to include two additional study areas at Arcadia and Big River Management Areas. To date, 130 woodcock have been captured and had radio transmitters placed on them, nearly 45 per year.

Detailed information is being gathered about the birds' ecology and habitat use and to help guide management projects in the future. The first two years of the pilot project also helped us to learn about the value of the recent clear cuts and the adjacent habitats. It was discovered that birds captured and banded on the singing grounds at Great Swamp spent much of their time during the day foraging in the rich flood plain soils of the adjacent Pawcatuck and Usquepaug Rivers. Located within one mile of the singing grounds, these areas were found to be rich with earthworms. During the evening, they returned to demo area at Great Swamp to roost in the large meadows. Thirty five other bird species were identified as using the managed habitats in the demonstration area including five high priority song birds (Eastern towhee, Blue-winged warbler, Indigo bunting, Field sparrow and Whip-poor-will) listed in the RI Comprehensive Wildlife Conservation Strategy Plan.

The outputs from these projects will yield great benefits toward a better understanding of woodcock habitat needs and how to best manage habitats for these birds in Rhode Island. There is also a benefit to the documentation of other wildlife that also benefit from the restoration of young forest habitats. There are insufficient young forest habitats currently available in the state to recover these species. It will take significant efforts in the future by the DEM and its' partners, in collaboration with private forest landowners, to maintain and restore these wildlife populations, which are so important to the natural history of our state.

Helpful Links:

Woodcock information http://www.timberdoodle.org/

Best Management Practices in RI http://www.dem.ri.gov/programs/bnatres/fishwild/pdf/grousbmp.pdf

Women's Day at the Great Swamp Shooting Range *by Dori Hillery*

Photos: M. Hillery

To whom this may concern,

I know that the only time people write is to complain and they never take the time to write a compliment when something good happens. The following is a well deserved thank you concerning the Ladies Day at the Great Swamp Target Range in West Kingston, RI last Saturday May 19, 2012. From the knowledgeable instructors to the organization of the whole day it was obvious to all who attended that a lot of time and effort was put into making this event a big success.

I wanted to take this opportunity to thank everyone involved. It ran so smoothly, everybody was very professional. They were all extremely knowledgeable, easy to understand, kind and reassuring. This was not what I expected when my husband told me we were going to the Great Swamp Target Range, not what I expected at all. This was such an unexpected pleasant surprise.

It all began when my husband, Mark, wanted me to learn an appreciation of his favorite pastime, shooting guns; I agreed to attend the event with much apprehension. I owed him this after all the times I had dragged him with me on endless shopping sprees and little kids birthday parties. Never one to have been fond of guns, in fact they make me quite anxious. I was not looking forward to this day even though I had convinced my husband that I was. The big day finally comes around and of course it's a perfect day, the one time you wish for a rainy weekend it doesn't happen, there was no getting out of it. We also brought our two college age daughters.

We were among the first to arrive. I was surprised to see such an eclectic group of females from ten year olds in Hello Kitty t-shirts to diamond diva seasoned citizens and everything in-between. Not what I had pictured. I thought I was going to be with a bunch of warrior women with belts of bullets strapped across their chests and carrying giant bowie knives like Crocodile Dundee. You know, female Rambo types who wouldn't give me the time of day. What I did meet that day was the total opposite; the friendliest bunch of women from all walks of life had come to shoot guns, just like me.

After we all had a briefing from Walter, who runs the range, I was first in line for the rifle. Ken, my instructor introduced himself then he led me down the line to our area. I could feel my heart pounding out of my chest, my palms were sparkling,(*women don't sweat they sparkle*). I thought I was going to pass out I was so nervous. I didn't want to wimp out and disappoint my husband. Ken began carefully explaining everything to me about safety and the names of the different parts of the gun. I came into this knowing absolutely nothing. I was amazed at how concise and knowledgeable he could be in such a short time and how he was able to get me to actually understand what he was talking about. He was extremely calm and composed. Then something strangely tranquil happened. I was getting this, it's just common sense. With his reassuring smile and gently quiet voice (*this could have been because we were all wearing earplug*s), nevertheless, it worked and I began to relax and enjoy the moment.

This was finally it. Ken handed me the rifle I held it in my arms. He had shown me how to hold it and how to use the sight and then he handed me a bullet and watched me carefully load the rifle. He stood over me telling me to take my time, let my breath out, relax my shoulders and when ready just shoot. When I was finally ready I said to myself "you can do this"...I felt like I sat there for a lifetime, somewhere from above I heard Ken's voice again "let your breath out and relax", and all at once it seemed like time stopped. I couldn't hear or see anything except that target. I was focused, I put my finger on the trigger and squeezed. All of a sudden I heard, "good shot five o'clock right below the X." I turned my head around and saw my husband smiling at me and nodding his head. I could tell he was delighted. When I was done, Ken said "You shoot like a sniper. Good grouping." I felt like a million dollars.

During the course of the day I shot the 22 rifle, a revolver, skeet with a shot gun and even black powder— yes, a musket type from colonial days. I also tried my hand at archery. Walter told my daughter that I did fantastic for my first time because I got them all on the target. Last but not least, I actually tried tomahawk throwing. I actually got a couple tomahawks to stick on the wooden target. I don't know if I really have a hidden talent or if all the instructors told everybody how good they did, but I was absolutely thrilled from all the positive and reassuring feedback I received from all my instructors that day.

I want to express my sincerest admiration to all who coordinated and worked at this event. I hope you plan on doing it again soon. Thanks for such an enjoyable day and a wonderful experience.

Dori Hillery is from Exeter, RI.

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

It's summer! And it's time to relax and head outdoors to your favorite swimming or play area. Solve these puzzles for some great ideas of where to go to stay cool.

Activity 1

One letter of the alphabet is missing in each grid. Write the missing letter in the numbered spaces below. Then read across to find a spot to stay cool and have fun:

____ ____ ____ ____ ____

1 2 3 4 5

1

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

2

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

3

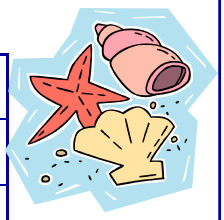
N	D	H	U	Y
K	W	O	P	E
G	Z	X	I	V
R	M	C	L	S
F	J	Q	T	B

4

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

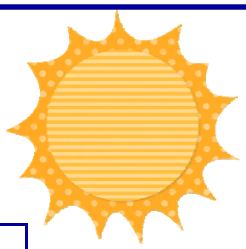
5

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



Activity 2:

Put the words in alphabetical order from A to I. Then write the shaded letters (going from top to bottom) in the blank spaces to find the answer to this question: What is one activity that you can do at the location previously mentioned?



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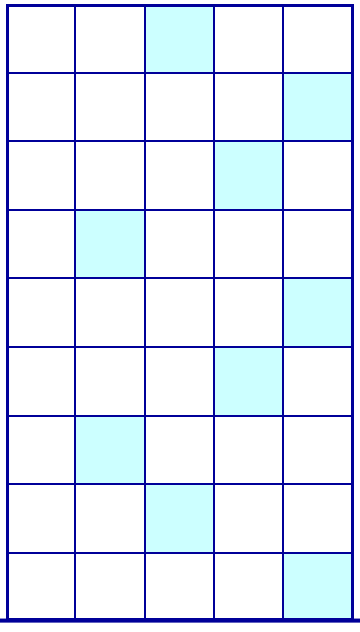

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Wild Rhode Island Calendar July —September 2012

July 9— RI Marine Fisheries Council meeting at 6pm, URI/GSO Narragansett Bay Campus, Corless Auditorium, South Ferry Road, Narragansett.

July 15—Great Outdoors Pursuit, 11 am -3 pm, Blackstone River State Park, Lincoln. www.riparks.com

July 29—Governor's Bay Day and Great Parks Pursuit, 11 am—3 pm. Two locations, Goddard State Park, Warwick and Roger Wheeler State Beach, Narragansett. www.riparks.com

August 15—Application deadline for participation in the PWSB Cooperative Deer Hunting Program and Scituate Reservoir for the 2012-13 season. After July 1 applications may be found at: www.dem.ri.gov/topics/wltopics.htm

August 18—Great Parks Pursuit Finale Burlingame Campground, Charlestown. www.riparks.com

September 8—Tentative date for Junior Pheasant Hunting Orientation Workshop. Registration deadline, September 3. Call 401-783-2304 for more information.

September 8 & 9 Junior Archery Hunting Weekend, Statewide. For junior hunters ages 12-14 years. Must be accompanied by a qualified adult , 21 years or older who holds a valid RI Hunting License. For more information call 401-789-0281.

September 10 — RI Marine Fisheries Council meeting at 6pm, URI/GSO Narragansett Bay Campus, Corless Auditorium, South Ferry Road, Narragansett, RI.

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