



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

A Welcome Message from the Chief by Michael Lapisky



Photo: Chris Powell

Welcome! I am proud to be presenting you with the first issue of **Wild Rhode Island**. The Rhode Island Department of Environmental Management Division of Fish and Wildlife has designed this newsletter to keep you informed of the activities here at Fish and Wildlife. While this is a great resource for our hunters and anglers we hope that everyone will find something of interest in **Wild Rhode Island**.

We will be publishing **Wild Rhode Island** four times a year to provide information about the projects we work on in our three sections: Freshwater Fisheries, Marine

Fisheries and Wildlife. Topics will include: updates on hunting and fishing regulations, upcoming events in the Division and in our Aquatic Resource Education Program, and facts about Rhode Island wildlife and habitats. As part of our mission to conserve and manage Rhode Island's natural resources, we are involved in a variety of projects that range from juvenile finfish surveys, midwinter waterfowl surveys and anadromous fish restoration. Every issue of **Wild Rhode Island** will feature different projects that our biologists work on each season. There will also be a **Kids Corner** which will have fun activities for our junior outdoor enthusiasts.

I hope you find **Wild Rhode Island** a timely and educational publication as well as an entertaining read.

Inside this issue:

Ice Fishing in Rhode Island	2
Wild Places - Galilee Bird Sanctuary	3
New Eelgrass Atlas	4
Calendar of Events	4
Species Spotlight: Atlantic brant	5
ARE's Salmon in the Classroom	6
Kids Corner	7
Message from the Director	8

Summer Flounder in 2008 by Mark Gibson

First, let me repeat the Chief's welcome to our newsletter. For the inaugural issue, I would like to highlight a topic of interest to both commercial and recreational fishermen for 2008, the summer flounder fishery. Our commercial quota and recreational opportunities will be lower in 2008 than in 2007. That will require the Division to make difficult management decisions.

Management of summer flounder was once viewed as a major success but is now seen by some as a debacle. I don't share either view but admit that the current situation is very confusing to the fishing public.

It is widely accepted that the summer flounder stock collapsed under heavy fishing pressure during the 1980s. Intensive management has allowed for significant increases in biomass and an extension of the population age structure. Then why are commercial quotas and recreational fishing opportunities being curtailed? The answer lies in the nexus of the law and uncertain sci-

ence. The law requires depleted fish stocks to be rebuilt in a fixed period of time, usually 10 years. Although the reauthorized Magnuson-Stevens Act provided for a three-year extension for summer flounder, there is still a deadline to be met. The Act requires scientists to estimate how large the stock is and what size constitutes a rebuilt population.



Photo: Scott Olzewski

Continued on page 6

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.



W. Michael Sullivan, Ph.D.
 Director,
 Rhode Island Department of
 Environmental Management

Larry Mouradjian,
 Associate Director,
 Bureau of Natural Resources

Michael Lapisky,
 Chief,
 Division of Fish and Wildlife

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Publisher: Kimberly Sullivan,
 Senior 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, click on *Offices and Divisions*, then *Fish and Wildlife*

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

Ice Fishing in Rhode Island by Veronica Masson

It may be cold out but there's no need to sit home and dream of fishing when you can be adventurous and try fishing in a whole new way. When you are properly prepared, ice fishing can provide an action packed day of fishing and fun.

In Rhode Island, there are several different species of fish that are available to the ice angler. Trout, Northern pike and Atlantic salmon broodstock provide for an excellent winter fishing experience for Rhode Island anglers. DEM's Division of Fish and Wildlife stocks trout in many area ponds for winter ice fishing. Northern pike can be found in five area ponds and are very exciting to catch through the ice. The ponds that contain pike include: Stump Pond and Johnson's Pond in Coventry, Worden's Pond in South Kingstown, Chapman's Pond in Westerly, and Waterman's Reservoir in Glocester.

Additionally, Atlantic salmon broodstock were stocked in five ponds for ice fishing this winter. Approximately 500



Photo: Veronica Masson

Atlantic salmon were stocked in Olney Pond in Lincoln, Carbuncle Pond in Coventry, Stafford Pond in Tiverton, Barber Pond in South Kingstown and Meadowbrook Pond in Richmond. The fish were generously donated to Rhode Island from two Federal Hatcheries: Nashua National Fish Hatchery in Nashua, New Hampshire and White River National Fish Hatchery in White River Junction, Vermont.

Before venturing out on the ice make sure you are prepared. Make sure that the ice is at least six inches thick before venturing out. It generally takes at least five to seven consecutive days of temperatures in the low 20s before ice may become safe. Even then, the strength of



Photo: Kimberly Sullivan

the ice is determined by a number of factors such as the size and depth of a pond, the presence of springs or currents, and local temperature fluctuations.

Important things to remember are a current fishing license, warm clothing, and proper equipment. A current fishing license and a Trout Conservation Stamp are required to keep or possess salmon or trout. The daily creel and possession limit is a total of two per day of trout or salmon and two per day of pike. For more details, please call (401) 789-0281 to request a copy of the *2008 Rhode Island Freshwater Fishing Abstract*.

Be sure to bring plenty of warm clothing. Hypothermia and frostbite can happen very quickly and the best defense is to be prepared. It is often a good idea to wear flotation under your warm clothing. Basic equipment for ice fishing can include: an ice auger or drill, an ice dipper for scooping ice out of the hole, a chair on which to sit, a container for fish, a trash bag for litter and of course, a rod, reel and tackle.

Be safe. DEM has an ice safety guide that can be found on our website, www.dem.ri.gov. To find it click on *Offices and Divisions*, then *Parks and Recreation* and then *Hot Topics*. Check with the individual community for up-to-date ice conditions on local ponds. DEM only monitors ice conditions at four Rhode Island ponds. For information regarding ice conditions call (401) 222-2632 or check the website.

If you would like to learn more about ice fishing consider participating in an ice fishing class offered by the DEM, Division of Fish and Wildlife's Aquatic Resource Education program. A new course is being offered on February 16, 2008. Please call (401)789-0281 for more information or to register.

Wild Places by Brian Tefft

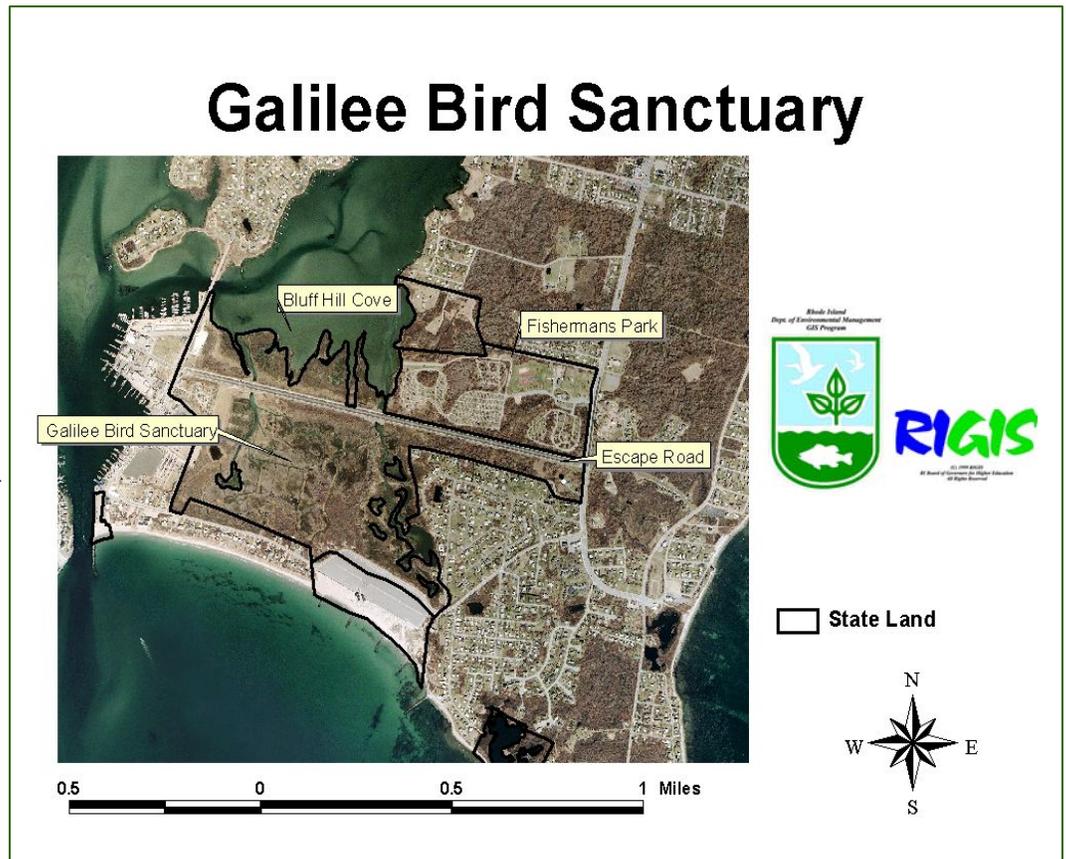
Galilee Bird Sanctuary — Winter Waterfowl Destination

Whether you are a hard-core bird watcher or just a casual observer of nature, the Galilee Bird Sanctuary offers you outstanding opportunities to observe winter waterfowl and other wildlife east of the picturesque village of Galilee. As its name implies, Galilee Bird Sanctuary is a wetland sanctuary for salt marsh birds and coastal wildlife, located in Narragansett, RI along the Galilee Escape Road. The 128-acre wildlife management area was acquired by the state in 1955 and is managed by DEM's Division of Fish and Wildlife.

Before wetland protection laws came into being, this once impressive coastal marsh was used as a disposal site for dredge materials. A final blow to the area ecology was dealt after the great hurricane of 1954, when the marsh was further fragmented and filled in by the construction of the Escape Road, built to allow residents to "escape" in the event of future storms. The filling and restriction on natural tide water flow caused the salt marshes and the habitats they support to die. As a result the marsh was invaded by non-native plants which are of low value to ducks, geese and other wetland birds.

These environmental injustices were reversed by an impressive salt marsh restoration project that was completed by DEM in 1997. Restoring the marsh included the removal of dredge fill from wetlands, building tidal creeks and ponds and the reintroduction of daily tidal flow to the marsh. Very soon, native salt marsh grasses, *Spartina alterniflora* and *Spartina patens*, began to naturally return to the marsh and the response from wildlife soon followed. Within the first few months, fish, crabs and mollusks began to fill the new tidal creeks and ponds. Almost immediately, waterfowl, shorebirds, wading birds and rails returned to Galilee habitats in great numbers.

Winter is an excellent time to observe waterfowl in Galilee. The busy crowds of summer are gone and the observer may park and walk along the Escape Road in relative quiet to view birds in the creeks and pond to the north in Bluff Hill Cove or to the south within the Bird Sanctuary. The height of the Escape Road allows for an excellent view into the marsh and, with a spotting scope or a good pair of binoculars, birds can be observed from a distance.



January and February are the best times to spot waterfowl in Galilee and at least 11 different species of waterfowl may be seen. The American Black duck is one of the species most likely to be seen at Galilee where it makes use of salt marshes in winter to feed on snails and vegetation and rest in secluded tidal creeks. As winter transitions into spring, chances improve to see shorebirds feeding in exposed mud flats at low tide and long legged wading birds foraging in tidal creeks. At this time, shorebirds and waders that can be seen include Greater and Lesser Yellowlegs, Semipalmated Sandpiper, Willet, Snowy and Great Egrets.

To get there, take Route 1 south to Route 108 into the village of Galilee.

Remember!

All users of State Management Areas are required to wear 200 square inches of solid daylight fluorescent orange (generally, a daylight fluorescent orange 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 annually. There are more specific requirements for shotgun season and hunters. For a detailed list please call (401) 789-0281 to have a copy of the *Rhode Island Hunting and Trapping Abstract* sent to you or check www.dem.ri.gov.

New Atlas Shows Eelgrass Increasing In Narragansett Bay by J. Christopher Powell

A recent survey of Rhode Island waters shows that eelgrass abundance and spatial distribution is increasing. In 1996 a survey was conducted and approximately 100 acres of eelgrass was identified. The most recent survey, completed in 2007, found almost 500 acres of eelgrass in Rhode Island. A new report and atlas, based on the new data, will show the distribution of eelgrass in Narragansett Bay and Block Island. The report became available in January 2008.

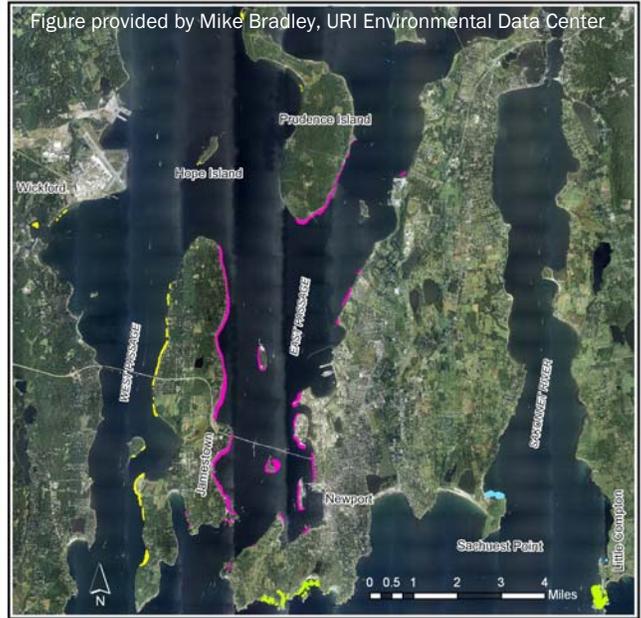
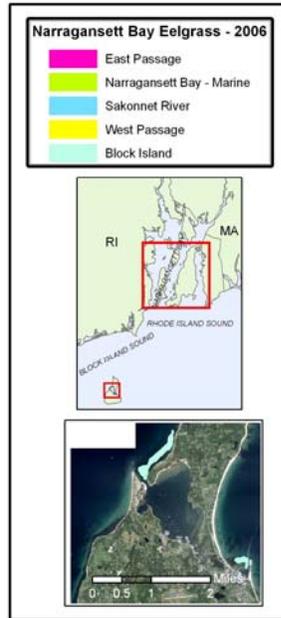
Eelgrass (*Zostera marina* L.) is an underwater flowering plant that grows in embayments along the northeast and northwest coasts of the United States. This submerged aquatic vegetation plays a crucial role in the health of estuaries as it provides important nursery habitat for marine life, helps stabilize sediments, and aids in filtering nutrients from the water column. Eelgrass has been deemed a critical marine resource and is currently protected by both Federal (Clean Water Act; 33 U.S.C. 26 section 1251 et seq.) and Rhode Island (RI Coastal Resource Management Plan) legislation.

To conduct the survey, true color aerial photographs of Narragansett Bay and Block Island were taken by the James W. Sewall Co. on August 5, 2006 using the NOAA Coastal Change Analysis Program. The timing of the flight was crucial because the optimal growing time for eelgrass beds had to coincide with high water clarity, which is less common in summer months. The initial interpretation of the eelgrass beds was completed using aerial photography, transparencies, and orthophotography. Subsequently, the total area including the deepwater edges of the beds was determined at low tide using underwater video equipment, depth sounder and view scope observations.

The results indicate that, during the fall of 2006 and summer of 2007, 465.5 acres of eelgrass were delineated, verified and mapped in Narragansett Bay and Block Island. The East Passage of Narragansett Bay had the highest amount of eelgrass with 208.9 acres. The largest eelgrass bed comprised 63 acres and was located off Sakonnet Point north of the Lighthouse. During the study, three sites within Narragansett Bay were evaluated for changes in spatial extent of eelgrass cover. At Potters Cove, Fort Getty in Jamestown, and the T-wharf at Prudence Island there was a substantial increase in

spatial extent of eelgrass between 1996 and 2006.

The survey found that true-color aerial photos, when taken under the proper conditions, are an effective tool for mapping eelgrass beds. Additionally, the study stresses the need to inventory and map eelgrass in Rhode Island waters more frequently than at 10-year intervals. A three to five year interval is recommended to ensure more accurate coverage. Mapping at more frequent intervals provides a more compre-



hensive assessment of eelgrass changes over time, and provides an indication of the health of Narragansett Bay.

The publication entitled *Report on the Analysis of True Color Aerial Photography to Map and Inventory *Zostera marina* L. in Narragansett Bay and Block Island, Rhode Island* by Mike Bradley, Kenneth Raposa and Sue Tuxbury is available on the Narragansett Bay National Estuarine Research Reserve's website at www.nbnerr.org.

DEM's Division of Fish and Wildlife contributed to the project by assisting with the verification of the deepwater edges throughout the bay. The Division provided staff, vessel time and underwater video equipment. Besides DEM's Division of Fish and Wildlife, primary contributors to the project were the URI Environmental Data Center, Narragansett Bay Estuarine Research Reserve, Save the Bay, and the RI Natural History Survey.

Calendar of Events January–April 2008

January 31 – Archery season ends
Trapping season ends (except beaver)
February 16 – Ice Fishing course offered by the ARE Program
February 25 – 29 – Hunter Education course, for information call 789-3094

February 29 – The 2007-2008 trout season closes
February 29 continued—Small Mammal season ends
March 1 through April 11—Trout fishing is prohibited

April 12 - Opening day for trout fishing
April 20 – Crow season ends
April 26 & 27, 2008—Special Wild Turkey season
April 30, 2008—Spring Wild Turkey season begins

Species Spotlight: Atlantic Brant by Jay Osenkowski



Photo by Mike Danzenbaker (www.avesphoto.com)

Atlantic Brant (*Branta bernicla*) are a type of waterfowl species that resemble a small Canada goose (*Branta canadensis*). However, instead of a large white patch on the cheek, Atlantic brant have several white bars which may form a ring around the neck in the form of a necklace. The neck, head, and chest of brant are black. These geese may be mistaken for ducks, due to their small size and rapid wing beats.

HABITAT AND RANGE: Atlantic brant are found along ocean shores and coasts. They prefer intertidal mudflats in shallow, protected coastal bays. Atlantic brant breed in the Arctic, and make long winter migrations to the Atlantic and Pacific coasts. Brant choose over-wintering sites based on the availability of food. They show high fidelity to their nesting and over-wintering sites and may return year after year to productive areas, forming large flocks.

FEEDING: Atlantic brant feed primarily on vegetation, which includes eelgrass, sea lettuce, and other submerged aquatic vegetation. On land, they will also feed on grassy lawns and golf courses. Shallow bays that are rich in submerged aquatic vegetation serve as important staging areas during Atlantic brant migration.

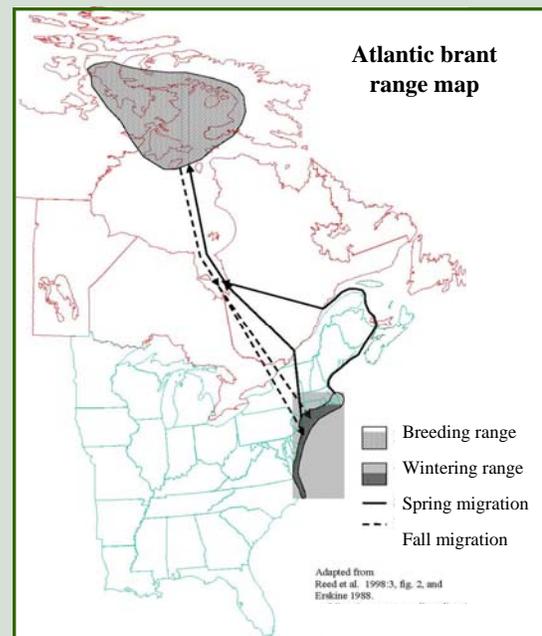
REPRODUCTION AND BREEDING: Atlantic brant begin breeding after they are three years old. Females lay four to six eggs, which hatch after 24 days. Upon hatching, the male leads the brood of goslings. The goslings feed on mosquito larvae, marine invertebrates, and aquatic plants until they shift to their adult diet of vegetation. The parents will accompany the young during their first winter migration.

CONSERVATION: Due to the Atlantic brant's dependence on certain submerged aquatic vegetation, as well as use of harsh environments, they may suffer heavy losses due to breeding failures and starvation. Their preferred food, eelgrass, is susceptible to loss from erosion, nutrient runoff, sedimentation, and disease. Atlantic brant populations have fluctuated significantly in the past suffering dramatic declines in the 1970s and early 1980s, however, rebounding to some extent in the 1990s and 2000s. Currently, the Atlantic brant population appears to be relatively stable.

DEM DIVISION OF FISH AND WILDLIFE CONSERVATION EFFORTS: A limiting factor affecting brant populations during migratory and wintering periods is the availability of food and expenditure of energy to exploit food resources. Furthermore, habitat condition and the availability of food on the wintering grounds influence reproductive success. The decrease and disappearance of eelgrass, the preferred food resource, and increased coastal development and use combined with discharge of pollutants has raised many questions regarding the quality of habitat on the wintering and staging grounds.

As a result, the Division of Fish and Wildlife has teamed up with the University of Delaware and the University of Rhode Island to investigate aspects regarding the foraging ecology of Atlantic Brant. This is a cooperative effort including the Atlantic coast states from North Carolina to Rhode Island, encompassing a significant portion of the Atlantic brant wintering range. The study investigates the time spent in various activities such as feeding, flying, and resting. In addition, an inventory of food resource types is being collected. Finally, using stable isotopes, we are investigating the shifts in food resources consumed over time to determine which foods may be important at various times of the year.

The Division, in cooperation with the Atlantic Flyway states, is hoping to gain insight on the foods Atlantic brant are consuming along their wintering and staging range as well as the energy spent in obtaining these foods. Factors such as disturbance from humans (e.g., boaters, joggers) may significantly impact the amount of time spent foraging. In addition, we hope to learn if brant exhibit a shift in food resource use prior to leaving for the breeding grounds. Ultimately, we look forward to gaining information on energy expenditure of brant, and identifying which habitats are critical for future conservation efforts.



ARE's Salmon in the Classroom Begins its 5th Year by Kimberly Sullivan

Five years ago, 14 Rhode Island schools began hatching Atlantic salmon eggs and releasing thousands of salmon fry into the Pawcatuck River watershed. This spring, 30 Rhode Island middle and high schools will be involved in one of the Aquatic Resource Education (ARE) Program's most popular programs, *Salmon in the Classroom*.



Winman Junior High School. Photo: Kimberly Sullivan

Introduced to Rhode Island by the Connecticut River Salmon Association, this program has been an effective and exciting learning tool for Rhode Island schools. *Salmon in the Classroom* is a multidisciplinary program that combines classroom learning with hands-on field trips to the Pawcatuck River Watershed. The Aquatic Resource Education program trains the teachers and lends each school the equipment necessary to construct an incubator system for the salmon eggs. Each class then hatches the eggs and raises them to the fry stage to be stocked into the Pawcatuck River or one of its many tributaries. While the eggs are hatching and devel-

oping into fry, the teachers present the class with a program that spans from salmon biology and ecology to the history of Rhode Island's Industrial Revolution. Mandatory stocking field trips are sponsored by the ARE program where students perform a series of chemical and biological monitoring techniques at their specified stocking location. By combining a classroom curriculum with outdoor experiential elements, *Salmon in the Classroom* is an excellent resource for teachers to reach students regardless of abilities or strengths.

Participating schools are gearing up for another successful season of *Salmon in the Classroom*. Teachers have begun introducing their students to the program and the students are preparing the incubation tanks for the egg arrival. Eggs will be distributed to the schools during the last week of February. In April students will begin assessing the area of the Pawcatuck where their salmon fry will be stocked. Actual salmon fry stocking will begin in May.

At the dawn of its 5th season, the success of the program is overwhelming; to date over 10,000 Rhode Island students have been involved in *Salmon in the Classroom* and over 4,500 have had the opportunity to be at the water's edge along the Pawcatuck River. By teaching Rhode Island students about Atlantic salmon biology and habitat, the ARE program hopes to inspire young Rhode Islanders to become stewards and take responsibility for their actions concerning the aquatic environment.



Charho Middle School
Photo: Kimberly Sullivan

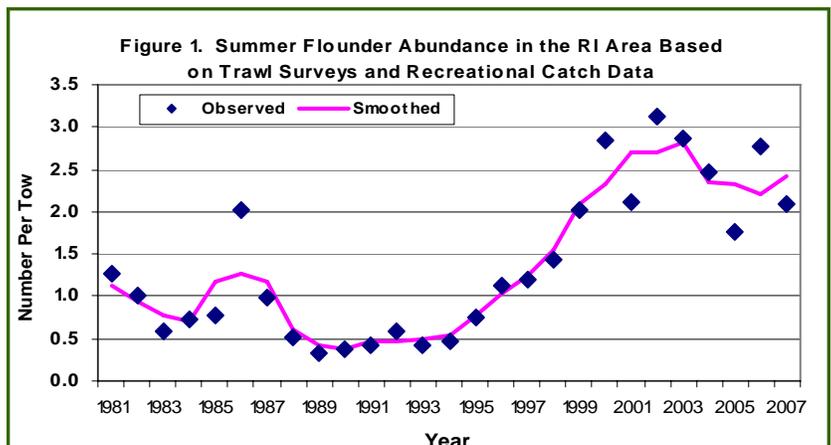
Summer Flounder in 2008 Continued from page 1, by Mark Gibson

If the gap between current biomass and the rebuilt target is large, rebuilding in a fixed time frame requires much sacrifice or it may not be attained at all.

Summer flounder is a case in point. While peer-reviewed science admits that stock biomass has increased substantially, it also projects that the stock can grow larger still, to twice today's biomass if fishing is kept in check. An alternate view holds that the stock has grown about as large as it can and is now being restricted by reduced growth rates and increased natural mortality. Summer flounder abundance in the RI area from research trawl surveys is shown in Figure 1. The data is a composite from state, federal, university and power plant surveys. The period of rapid population recovery from 1989 to 2000 is clearly apparent. Approximately, a 5-fold increase has occurred. Since 2001, the population has fluctuated at a high level but shows no indication of a further doubling. Why population growth has ceased has been much debated and will be addressed at the 2008 benchmark assessment and peer review. State, federal, and

industry scientists will participate in that review.

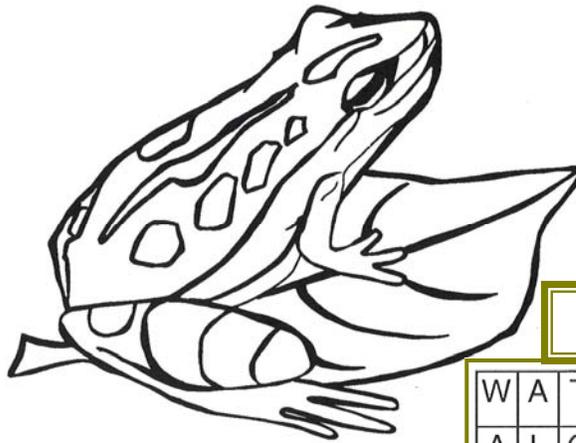
Until the discrepancy between current and rebuilt biomass is resolved, summer flounder management will continue to be restrictive in an attempt to rebuild the stock to a level never seen before. Stay tuned for a report later in the year.



Kids Corner! Presented by the Aquatic Resource Education Program

Color Me Green!

A healthy frog population is a sign of a healthy watershed. Do what you can do to keep the land and water where you live and play clean for today and tomorrow. Remember not to litter or pollute. Conserve water whenever you can. By taking care of your piece of Rhode Island, you will help keep our water clean.



Watershed Word Find

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

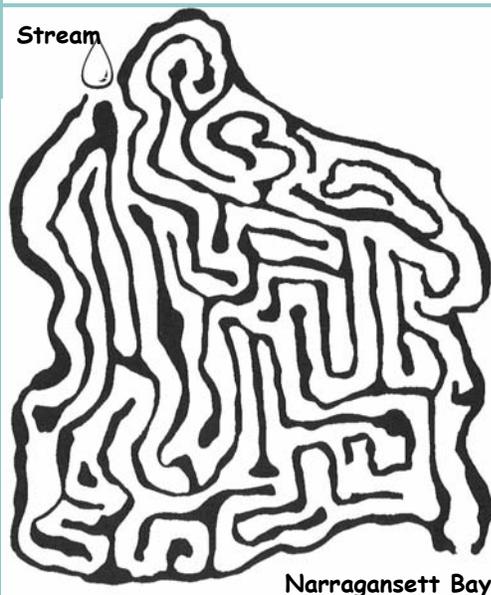
Can you find these words in the Watershed Word Find?

- | | | |
|-----------------|-----------|--------------|
| Clean water act | Pollution | Soil |
| Drain | Pristine | Storm |
| Drinking water | Pump | Stream |
| Fog | Pure | Swim |
| Forest | Rain | Valley |
| Groundwater | River | Water |
| Grow | Seep | Water supply |
| Habitat | Shower | Watershed |
| Hydrology | Snow | Well |

Water Maze

The water in Rhode Island's watersheds follows the contours of the land as it makes its way to Narragansett Bay.

Help this water drop make its way from a headwater stream all the way into Narragansett Bay.



Great Spots for Kids in Rhode Island!

Looking for a place to take the kids on a picnic? Browning Mill Pond in Exeter, Rhode Island is the perfect place to bring the whole family. Whether fishing at the pond, having lunch at one of the picnic areas, or taking an easy hike on the 1.3 mile path around the water, picturesque Browning Mill Pond is an ideal family spot. Plenty of parking and fresh air!

Note: If you walk on the path, please remember to wear 200 square inches of fluorescent orange (baseball hat) through February and from April 24, 2008 to the end of May. (for more information, see box on page 3)



Wild Rhode Island

A Quarterly Newsletter from the Division of Fish and Wildlife

Oliver Stedman Government Center
4808 Tower Hill Road
Wakefield, RI 02879
(401) 789-3094 TTD 711

TO:

We're on the Web!
www.dem.ri.gov
Click on *Offices and*
Divisions, then *Fish and*
Wildlife

A Message from the Director, W. Michael Sullivan, Ph.D.



Rhode Island is a beautiful state. We have a wide variety of habitats including marine, estuarine, freshwater ponds, woodlands, meadows, fresh and saltwater marshes, and vernal pools just waiting to be explored. Many people within the DEM community are working hard to protect these areas and the creatures that live within them, and to ensure that you, too, can enjoy the beautiful **Wild** places in our state.

It is our hope that **Wild Rhode Island**, whose printing is entirely supported by the federal Aquatic Resource Education grant, will help to enhance your enjoyment of the outdoors, by bringing you information that will lead you to more fully explore our beautiful management areas, coastline, and other natural areas. We hope, too, that you will gain a broader

understanding of our roles as stewards, both in the field and in the classroom.

Whether you hunt, fish, hike, canoe, or just watch nature, there is more to explore in Rhode Island than you might have imagined, at little or no cost. It costs nothing to get out of the house and enjoy the outdoors, go for a walk in the Arcadia Management Area, sit on the beach at Goddard Memorial State Park and watch the birds, or collect shells at Fort Adams State Beach or Brenton Point.

Enjoy, and go **Wild**.

WMS

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