## The Norman Bird Flyer

A QUARTERLY NEWSLETTER

## Life in a Salt Marsh

by Hap Morgan, NBS Naturalist

Summer 1991

Salt marshes are low-lying wetlands that are affected by the incoming and outgoing ocean tides. Coastal salt marshes occupy positions between the open ocean and areas of freshwater. They exist in a transition zone where sea water mixes with fresh.

An example of a local salt marsh can be found along Third Beach Road near Third Beach and Sachuest Point Wildlife Refuge. Here, the Norman Bird Sanctuary and the federal government protect a small, but very productive tidal

wetland habitat. Local school children have been exploring the marsh under the guidance of the Sanctuary staff where they learn about the immense ecological value of a wetland. Once thought of as a wasteland, marshes are now understood to be the breeding ground for more than two thirds of the commercial fish and home to many different birds, mammals, plants and insects.

I love bringing school children to the salt marsh in the early morning to share its peace and beauty. Singing Red-winged black-birds, wading egrets in the shallows, and smelling the fragrance of the wild roses and the tang of salt and mud floating on the morning breeze thrills me. If you really listen, you can hear the wind rustling the leaves of the cattails or the tall phragmite reeds. Walking along the sponge-like shoreline of the marsh, sharp pungent odors of decomposing plants assault the senses. Most of the decomposition is anaerobic (without oxygen) and this causes the strong sulphur-like odor. The decomposition is producing detritus. I

call it "fish food". Detritus is tiny particles of plants and bacteria that are broken down during decomposition and released into the flowing water. Filling a glass jar with water from the marsh and holding it up to the light will reveal how much detritus there is. Of course, a microscope is needed to see the bacteria, the tiny phytoplanktons (plant) and the tiny zooplankton (animal).

The planktons and detritus are the beginning of the food chain. For example, detritus

is eaten by crabs and small fish, which are eaten by blue fish, which in turn, are eaten by humans.

I'll bet everyone that has been to a salt marsh has seen tiny fish swimming in schools in the rust colored brackish waters. These are Mummichogs (Fundalusheteroclitus). A mummichog can adapt to all levels of salinity content from 0 to 35 parts per thousand and

can survive water temperatures from 30 to 85 degrees Fahrenheit. It will eat just about anything smaller than its four inch self.

A seine net will help catch mummichogs and sometimes tiny shrimp. The Common prawn (*Palaemonetes vulgaris*) is a shrimp only about 1 inch long, somewhat clear and a greenish gray in color. Related to crabs and lobsters, prawns are crustaceans, having an exoskeleton. Shrimp willeat both plant and animal matter (continued on next page)

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... and more

(continued from page 1) and are then eaten by larger predators.

Another crustacean found at the salt marsh is the Fiddler crab (*Uca pugnax*). It is a distinctive looking crab with a large claw on either the left or right side. The fiddler uses the claw for displaying territory, fighting off male intruders and for attracting a female fiddler. The burrow in the marsh sand deters prospective predators away. The fiddler usually feeds on land using its primitive lungs for breathing though it does have gills like most crabs.

Wading in the shallow water, near the grassy bank, standing as still as a statue, a Great Blue heron (Ardea herodias) is poised to stab at a darting fish or crab. As tall as forty inches, the Great Blue heron is very impressive both in hunting and flying with its large outspread wings and tucked-in neck and head. Other wading birds are the smaller Green heron, Black Crowned Night heron and the Snowy egret. Not very often but from time to time an American Bittern can be spotted among the salt marsh grasses.

I know Spring has arrived when I hear the Red-winged blackbirds singing and see them flitting in and out of the cattails or



phragmites. It is unmistakable to identify with a red epulet on the wing, otherwise a robin size blackbird. The call of "konk-la-ree" is music to my ears. Primarily insect eaters in the summer, there is a seasonal abundance of food for them.

A Snapping turtle (chelydra serpentina) almost eigh teen inches across was swimming slowly along the bottom of the marsh channel on a sunny mor ning last spring. I was glad I wasn't seining at the time! Snapping turtles are very common on Aquidneck Island and seem to be able to withstand the high salinity content of the salt marsh quite easily. An adult turtle of this size probably has only one predator, humans.

The grasses which give the salt marsh the appearance of a lush meadow are the spartinas. The first one we see is the Spartina alterniflora, taller and growing closer to the water's edge than the lower growing Spartina patens. The roots of these grasses actually holds the marsh together. The plants are food for so many organisms. The seeds, the stems, leaves and the rootstocks are all part of the enormous food chain in the marsh.

Underneath the grassy leaves of the spartinas is another

plant called Glasswort. The most distinctive thing about this fleshy plant is its lack of leaves. It will grow as high as twelve inches, though rarely have I found it more than three or four inches. "Salt pickle" as it is sometimes called, is deliciously salty and is eaten by raccoons, skunks, muskrats, and snails.

One cannot look at a salt marsh without noticing the tall swaying reeds and cattails. As serene as this may appear, there is actually a war waging between these two beautiful plants.

Two species of narrow leaved cattails are important to the food chain of the marsh; Typha angustifolia is found in the more sa-

line water while the Typha latifolia is found where fresh water is more dominant. Insects, geese and muskrats eat the stems and the rootstock. The leaves offer shelter to many animals including Red-winged black birds, herons, geese, ducks, muskrat, mink and otter. The male flowers and the entire rootstock are eaten by humans for the high nutrition and flavor.

The tall reed with a fluffy seed head and often growing fifteen feet high,

is called Phragmite reed (Phragmites communis.) Feathery and beautiful as it sways in the breeze, this exotic plant flourishes where the salt marsh has been disturbed by people.

Wetland ecologists see the phragmites as a sign of a failing marsh. The phragmites offer very little food or shelter to the salt marsh animals and compete for space with the cattails, that more often than not, lose the war against them.

New regulations and the adoption of the Clean Water Act of 1977 are slowly helping to protect and control usuage of coastal salt marshes. We should all be grateful for such wonderful habitats and do our part to ensure their protection for all time.

Please Note: Sea Lavender, a popular salt marsh plant to gather for its small purple flowers growing in a cluster, is now protected under a new bill passed in the R.I. General Assembly. Written permission by the land owner is needed before collecting Sea Lavender on private or state land.







#### Tree Swallow Conservation Project

For the fourth year, the Sanctuary, with the help of Advisory Committee member Ray Rogers, set up 46 nesting boxes that were donated to help conserve the local Tree swallow population. At the beginning of the season there was much courtship and nest building activity around the boxes by the swallows. During the nesting season, however, most of the boxes were taken over by House sparrows which displaced the swallows. During the final census of the boxes last week, we could find positive evidence of only three successful Tree swallow nests, which is very much below the 13 successful nests of last year.

Next year the Tree swallow Conservation Program will be be part of the International Environmental Partnership Program, (IEPP) sponsored by the National Audubon Society.

The IEPP will focus on migratory birds which breed here at the Sanctuary and winter in the Caribbean. It wil involve The Norman Bird Sanctuary, students from St. Georges, the Asa Wright Nature center in Trinidad, as well as students from three schools in Trinidad.

With the volunteer help of students from St. George's School, we will increase the number of nesting boxes, and begin to monitor the nesting boxes more closely.

Special thanks to Barbie Sturtevant, Byron Blandino, the Blanchettes, Cicely Thomas, Erika Sabel, David Martellino, Norm Hall, Valerie Druken John Busse and Frank Kostka who had built and donated Tree swallow nesting boxes for this project.



#### **Animal Pause**



The Sanctuary's" Henny Penny Fund for Animals" to date has collected \$ 75.47 from folks who have donated their pennies (even a piggy bank!) to help our resident animals. The jar is located at the registration desk in the barn. Hikers, both young and old have been tossing in their pennies since the Spring. We'll use the money for the care and feeding of our resident animals, as well as for those animals we take in that are in need of medical care. So, keep those pennies coming! Every little bit helps.

The Spring was filled with many calls regard ing "orphan" animals, most of which were suc cessfully reunited with their parents. Of those bird calls that were especially interesting in cluded the recooperation and release of a Saw-Whet Owl that was found by a local fishing boat 100 miles out at sea. The bird probably had been migrating northward and had be come disoriented by a storm. Two nights of a quiet, darkened cage and a few delicious mice perked him right up Only 8 inches tall, this species is

Another bird, brought to us after being chased into the water by a dog was none other than a male R.I. state endangered Piping Plover.

Apparently weakend by migration, this individual was carefully transferred to U.S Fish and Wildlife officers where he underwent monitoring and was released.

most often found in northern

coniforous forests.

A Henny Penny replacementnever! But we will be getting another R.I. Red chicken soon. We thought we had found one when we received "Henrietta" from Agway in Portsmouth. She had a broken leg and was being picked on by the other chicks. After a few weeks of care and lots of consideration, we decided to put her to sleep when she couldn't support her growing weight on her good leg.

When we do get another chicken, we'd like YOU to help us name her. It's our "Name Our Chicken" contest. You can drop off your suggestion in the office. If we choose to name her with your suggestion, you'll get your picture taken with her for the Fall newsletter and a \$5 gift certificate towards the Sanctuary store. Good "cluck"!

Attention: Early Birds.....
Sunday Morning Bird walks
will be discontinued until
Sunday, September 1 at 8 am.

## Star Gazing without a telescope at NBS with Bill O'Connell

Thursday, August 8 9 pm (Cloud date, August 9) Thursday, September 12 9 pm (Cloud date, September 13) Thursday, October 10 9 pm (Cloud date, October 11)

Free. No pre-registration necessary



\$ 100

□ Life

\$1,000

## Please Join Us Today!

Your membership supports our conservation and nature educational programefforts on Aquidneck Island, and our management and preservation activities here at the refuge.

Name:	
Address:	
Town/City:	
State:	

Please return with your check, payable to The Norman Bird Sanctuary 583 Third Beach Road Middletown, R.I. 02840

# Summer Programs for adults, children and families

Two Part Class: Herbs and Natural Healing

Tuesdays, July 23 and 29 6-8 pm

Hap Morgan, NBS Naturalist will introduce participants to the history and study of herbalism during this two-part class. A field identification walk and information on the harvesting, storage, and preparation of herbal medicines will be covered. Pre-registration is required.

Fee: \$16 (\$12 NBS members) Limit: 12

Traditional Berry Basket for older children and beginner adults Saturday, August 3 2-5 pm

If you've never made a basket before but would like to learn the basics, this is the class for you. Participants will make a simple berry basket to hang on a door, or to gather berrys in, of course! Sharon Culberson of Hilltop Gardens will be the instuctor for this start-to-finish class. Children, age 9 and older and adults are welcome. Bring clippers or heavy scissors. Pre-registration is required.

Fee: \$12 (\$10 NBS members) Limit: 12

Red Maple Swamp Discoveries Tuesday, August 6 6-7:30 pm

For children, ages 5 and older and their families, this "hands-on" class will be only for those young at heart. We'll catch and learn about pond bugs, romp in the mud a bit, and try to outsmart the frogs that live in this fascinating habitat at NBS. Wear a long sleeved shirt, long pants, sneakers or boots that can get wet, and lots of "bug juice".

Fee: \$6 (\$5 NBS adult members) \$5 (\$4 NBS child members) Limit: 15 Wild Edibles Walk Wednesday, August 14 7-8:30 pm

Discover the delectable tastes of nature's kitchen cupboard. Lamb's quarters, Cat briar, Irish moss, and Rose hips are abundant this time of year and just waiting to be tasted. Hap Morgan, NBS Naturalist, will be your guide and will identify wild edibles through the Sanctuary's fields and forests. Recipe handouts and delicious samples will be available to taste. Pre-registration is required.

Fee: \$9 (\$6 NBS members) Limit: 15

Life Between the Tides Saturday, August 17 7 pm

Learn about the ocean life of the salt marsh, and the sandy and rocky shores with Larry Taft, NBS Director. He'll talk about the animal and plant life that can be found at the high tide line or caught with a net. Wear shoes that can get wet and insect repellent. Adults and children accompanied by adults are welcome.

Fee: \$6 (\$4 NBS adult member) \$3 (\$2 NBS child member) Limit: 15

Barn Owls: Going, Going, Almost Gone! Wednesday, August 21 7 pm

Known as the "ghost" owl, the Barn Owl is quickly disappearing on Aquidneck Island as its hunting fields become housing developments and nesting barns are renovated or torn down. Chris Raithel, a biologist with the state's Natural Heritage Project will share his expertise on this owl through slides and collected data. Open to adults and interested older children.

Fee: \$4 (\$3 NBS members) Limit: 20 Scrap Basketmaking Workshop Saturday, August 24 1-4 pm

This basket will be designed by you, using materials left over from a year's worth of classes! A variety of colored strands and reed sizes will be available. The final cost of the basket will be determined by the quantity of materials used (\$8 per pound). Join Sharon Culberson, as the instructor of this unique class.Bring clippers or heavy scissors.

Fee: \$14 (\$12 NBS members) plus material fees based on the final product Limit: 12

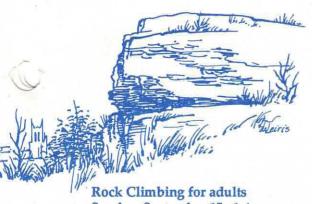
Going Fishing: Learning About Our Local Catch Sunday, September 15 7-9 am

Grab a bucket and your favorite pole to join Dan Snydacker, "world's greatest fisherdad" as he shares his love for both fishing and kids. Children in grades 2-5 accompanied by a parent or adult friend can learn about bait, lures, casting, and poppers for catching some of R.I.'s fresh fish species-Bass, Trout, and Sunfish. The group will meet at St. Mary's Pond parking area in Portsmouth. Bring a snack, poles, and a bucket. In case of rain, the class will take place the following Sunday, September 22. Call for more information and to preregister.

Fee: \$9 (\$6 NBS members) Limit: 10 pairs



more programs on next page ...



Sunday, September 15 1-4 pm

Learn the basic rock climbing knots, the important climbing calls, and the safe use of climbing equipment. Then, challenge yourself as you scale one of the Sanctuary's ridges. Larry Taft and Lisa Pritchard will be the instructors for this course. You must be at least 16 years old to register. Preregistration is required.

Fee: \$16 (\$ 14 NBS members) Limit: 10

Fresh Herbal Wreath Saturday, September 21 1-3 pm

A colorful and fragrant fresh herb wreath will dry on the 6' frame and remind you of the Summer through the coming seasons. Small bouquets of thyme, sage, artemesia, statice, and dill are but a few of the herbs from which to chose. Sharon Culberson from Hilltop Gardens will be your instuctor. Bring clippers or heavy scissors. Pre-registration is required.

Fee: \$21 (\$18 NBS members) Limit: 12

Our thanks is due to the following volunteers who helped the Sanctuary with Spring activities...

\*\*\*For help at or donations for Birds and Breakfast:\*\*\*\* Kathy Finn, Dottie and Mark Vissman, Lori Dobbin, Ronnie and Pete Peterman, Marion Nelson, Mary Smith, Rosalyn Hall, Ruth Jernigan, Dierdre Roettinger, Mrs. Ferguson, Nancy and Gene Crooks, Helene Pritchard, Mary deLeiris, Connie Spinney, Martha Ullman, June Peckham, Callie Gottlieb, C.G. King, Lois and Ray Rogers, Jan and Tom Gunzelman, Gillian and Norman Hall, Gay Sheffield, Marjorie Ward, Jennifer Morgan, Chris Callahan, Julie Morris, Kathleen Tilley, Sara Meade, Anne, Pete and Kip Damon, Patti Corgan, Kim Mattheson, Hellie Casagrande, Fran Holmes, Mrs. Walker, David and Jane Steele, Share and Michaeleen Williams, Betsy deLeiris, Jan Goodland, Jeff Metz, Chris and Candy Powell, Barry and Bev Murphy, Laura Coggeshall, Kathy Irving, Harvest Natural Foods, Bank of Newport, Crystal Spring Water, designs unlimited, Grandma's Pantry, The Marriott, Brown Company, St, George's School, The New School, Ocean Coffee Roasters, R.I. Nursery, Sheffield & Harvey, The Sheraton, The Viking Hotel, Evelyn Rhodes, Cardinal Distributors, Pickles a Deli, Cappuccinos, Coffee Corner, Cookie Jar, Kathleens, Strudels and Cream, Country Cuisine, Crockett's Market, Frausch Bakery, Newport Art Association, Andrews and others whose

\*\*\*For office work and mailings:\*\*\*

Ray Rogers, Mary deLeiris, Fran Holmes St, George's students, Makeda Milele, Arthur Nelson, Evan and Leah Rosin-Pritchard, and Paula Rosin.

names may have been mistakenly omitted...THANKS.

\*\*\*For the care and/ or donations for our resident animals:\*\*\*

Forster Peabody, Peter Staley, Theresa Lynch, Emily and Becca Leslie, Michael Kosinski, Alexi Mazuroski, the Mazuroski family, Bob Janiesch, Tom Richter, Kim Wasko, Sam's Bait and Tackle, Clements' Market, and Star Market.

\*\*\*For educational programming:\*\*\*

Betsy deLeiris, Bunny McDonald, Bill O'Connell, Sharon Culberson, Diana DiBari, Sara Meade, Mary deLeiris, and Fran Holmes.

\*\*\*For trail clearing, gardening and litter patroling\*\*\* James, Conor, and Keelan Maguire, Marge Koch, Ginny Purviance, Jane Burdick



New NBS Staff

Welcome to our two new staff -Matt Benson, NBS Caretaker and Sue Vanderhoof, NBS Secretary.

Matt, a resident of Portsmouth is a much needed "Mr. Fix-it" at the Sanctuary. This Spring, he helped clear the orchard, mow the fields, and add shelving to our storage area. He keeps a low profile, but his work can be seen and appreciated by all of us.

Sue has put her professional secretarial skills to use in our office, store and reception area. Usually the first to greet you on the phone or when you come for a walk, Sue loves people and animals. She lives in Portsmouth with her husband Bob and 16 month old son, David.

Take \$1 off any program offered in the Summer 1991 NBS Flyer when you pre-register and pre-pay at least one week in advance by mail or in person. Present this coupon at the time of registration.

Offer good through October 1, 1991.

### ANNUAL REPORT April 1990- March 1991

#### Membership =

Over the course of the fiscal year, there was an average of 1288 active members. NBS membership has remained steady despite the recent economic decline.

#### Visitors "

The number of visitors that signed in to hike the trails this year was 8,643 which is 8% more than the previous year. (Surprisingly, November was by far, the most popular month!)

#### Personnel -

Two new people joined the NBS staff this year: Susan VanDerhoof has replaced June Doolittle as the Secretary / Receptionist. June will be going back to school to pursue a degree in music. Matthew Benson was hired as partime Caretaker replacing Hap Morgan, who is now working full-time as a Teacher/Naturalist.

#### Long-Range Planning

This year the Sanctuary began the process of long-range planning. Each of the sub-committees of the Advisory Committee (Buildings & Grounds, Education, Fundraising, Finance, Museum) worked on a segment of a 5 year plan. Once completed, the long-range plan should help the Sanctuary respond to the needs of the community effectively, while at the same time protect the refuge and its wildlife into the future

#### **Buildings and Grounds**

In addition to long range planning and the ongoing maintenance of the Sanctuary trail system and visitor center buildings, projects included renovations to the second floor of the director's residence, to make it useable as a living space and the reclamation of the apple orchard to favor the apple trees and to make it a more useable program area.

Operating Budget for FY 1990 - 91

REVENUES	
Contributions	5,730
Membership Dues	33,047
Sanctuary Store Sales	7,782
Norman Trust	32,223
Entrance Fees	7818
Education Program Fees	44,393
Project ISLLE Grant	10,703
Fundraising	21,680
Miscellaneous	173
Total Revenues	163,549
EXPENSES	
Salaries, Taxes,	
Employee Benefits	91,879
General Administrative	30,163
Buildings Grounds and	
Equipment	28,532
<b>Education Materials</b>	3,420
Animal Care	1,455
Miscellaneous	316
Transfer to Reserve	*7,784

Total Operating Expenses 163,549 excess / deficit 0

# RESTRICTED FUNDS Grey Craig Project Expenses 11,983

Museum Project Expenses 1,649
Other Restricted Expenses \*9,468

#### Land Preservation '

This year the Sanctuary negotiated a purchase and sale agreement for land and conservation easements to preserve nearly 50 acres of land on the neighboring Gray Craig estate. We also successfully completed a \$1.5 million capital campaign to carry out this project.

The Sanctuary also sponsored the formation of the Aquidneck Island Land Trust by providing a meeting place for the new organization and by acquiring a \$1000 grant for the Land Trust so that it could begin its own membership campaign.

#### Volunteers \*

The Sanctuary benefitted greatly from the help of over 300 volunteers at the "Harvest Fair" and 60 for "Birds and Breakfast". Through the year, more than 120 volunteers helped us with mailings, newsletter

and brochure layout, trail maintenance, stone wall repairing, litter patrol, graphics and animal care. Community organizations that provided volunteers included St.

George's School, Boy Scout Troop 1 in Portsmouth, South Eastern Massachusetts University, Volunteers in Action and the New England Wildlife Clinic.

#### Education '

This year has been very successful in the evaluation and creation of longe range goals for the Sanc tuary's educational programming. Highlights of the year are:

-The hiring of a full time Naturalist - 3,377 school children taking part in our educational programs through visits to the Sanctuary or as part of in-school outreach programs offered at the schools.

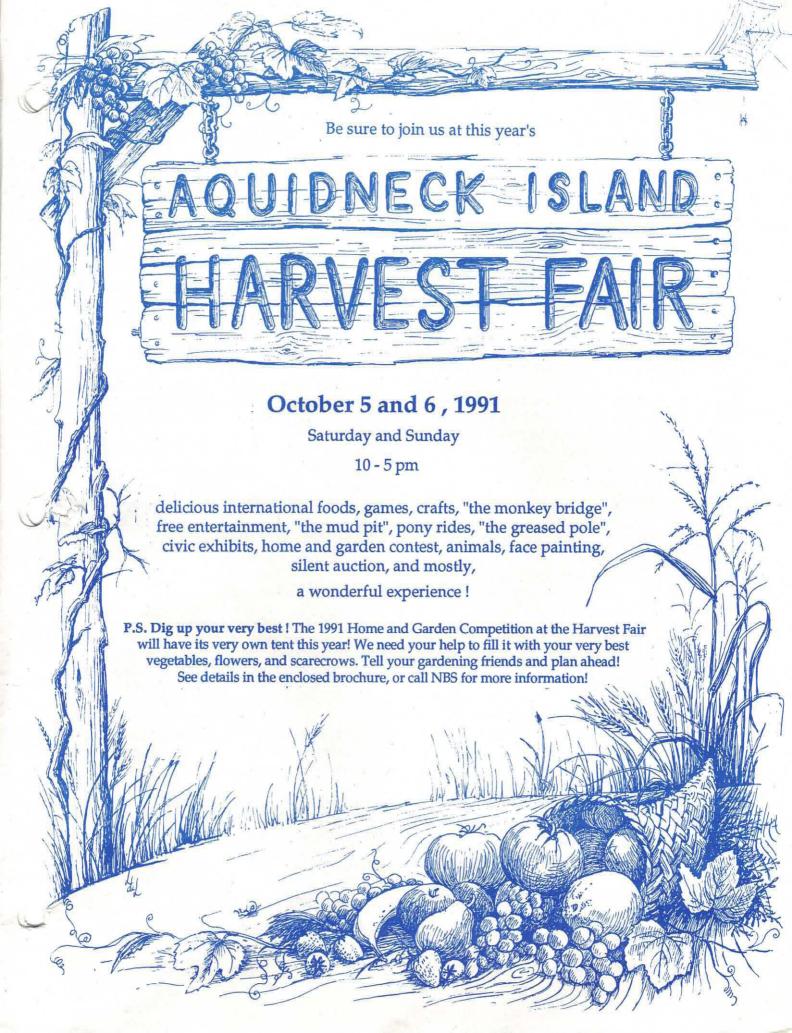
-Receiving a three year grant from the Rhode Island Foundation to sponsor "Project ISLLE-Island Schools Learning about their Local Environment", a year long program for 4th grade students. Based on a successful pilot year in 1989-90, the program reaches approximately tenclassrooms per year through Sanctuary visits and in-school programs.

-The first full year of having volunteers teach our "Pre-schoolers With Parents" program. This enabled the Sanctuary 's two educational staff to teach more school programs in the middle of the day.

- Prioritizing "more than once" inschool and on-site programs with the local school systems for the achievement of quality environmental educational programming.

 -Exploring future grant sources for school programs to subsidize fees paid by the schools.

-Expanding the present indoor space usage for educational staff offices, inclement weather needs, and child/adult learning classrooms.



Norman Bird Sanctuary 583 Third Beach Road Middletown, R.I. 02840

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#### OR TO CURRENT RESIDENT

The Norman Bird Flyer is published quarterly by the Norman Bird Sanctuary, a non-profit 450 acre nature preserve established under the will of Mabel Norman Cerio.

Trustee: Rhode Island Hospital Trust National Bank Advisory Committee: Anne Damon - Chairman, Lawrence Allen, Dick Boenning, Joyce Botelho, Betsy deLeiris, Thomas Gunzelman, Kathy Irving, Albert Marcantonio, Sarah Meade, Charles K. Moore, Julie Morris, Candace Powell, Horatio Rogers, Gay Sheffield, and Julie Toland.

**Director:** Lawrence Taft

Education Coordinator: Lisa Pritchard

Naturalist: Hap Morgan Caretaker: Matt Benson

Secretary/Receptionist: Sue VanDerhoof

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Illustration students.

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### In the Sanctuary store...

Nature Day Camp 100% cotton T shirts \$7.50 children's sizes S,M,L

Classic Audubon bird print postcards \$. 40 each

\$9.50 adult sizes M,L,XL

Colorful Margo Davis' Herb Posters \$10

- -aromatic herbs
- -traditional healing herbs
- -wildflowers
- -wild edibles

\*Members' 10% discount \* Support NBS \*

One touch of nature makes the whole world kin - William Shakespeare



#### Community Calendar:

August 9-11: Natural Organic Farmers Association (NOFA) Summer Conference

"Raising More Than Food" at Hampshire College, Amhurst, MA. Call Julie at (508) 355- 2853 for more information. For membership information in R.I., write NOFA/RI P.O. Box 83 Peace Dale, R.I. 02883.

September TBA: Household Hazardous Waste Pick Up. Call NBS or DEM 277-2808 in August for exact date and location.

September 14: The Nature Conservancy Land Trust Conference at the Norman Bird Sanctuary. For more details, contact the NBS office.

September 27-29 New England Environmental Education Alliance Conference in New Haven, CT. Call NBS for more information.

October 5-6 Aquidneck Island Harvest Fair 10 am to 5 pm. Lots and lots of fun! Want to lend a hand? Call NBS to volunteer.