



The Norman Bird Flyer

VOLUME 4 NUMBER 2 NORMAN BIRD SANCTUARY, THIRD BEACH ROAD, MIDDLETOWN, RHODE ISLAND 02840 PHONE 401-846-2577 *

FIRE

Of all destructive forces in Nature, wildfire seems the most devastating. One reads of the fires that rage over thousands of acres in the forests of the northern Rockies, and nearly every year some part of California burns then slumps off into the sea. In 1825, over 3,000,000 acres of forested land in Maine burned in what was known as the Miramichi fire. Boats, houses, whole towns burned.

But fire, ecologically speaking, is a necessary and decisive element in the creation of new life. In the temperate parts of the world, nutrient breakdown is slower than an individual plant's or natural community's growth rate. Fire liberates nutrients essential for new growth. Forest fires, brush, and prairie fires have been a key force in shaping the distributions of plant and animal communities across North America. Aquidneck Island is no exception.

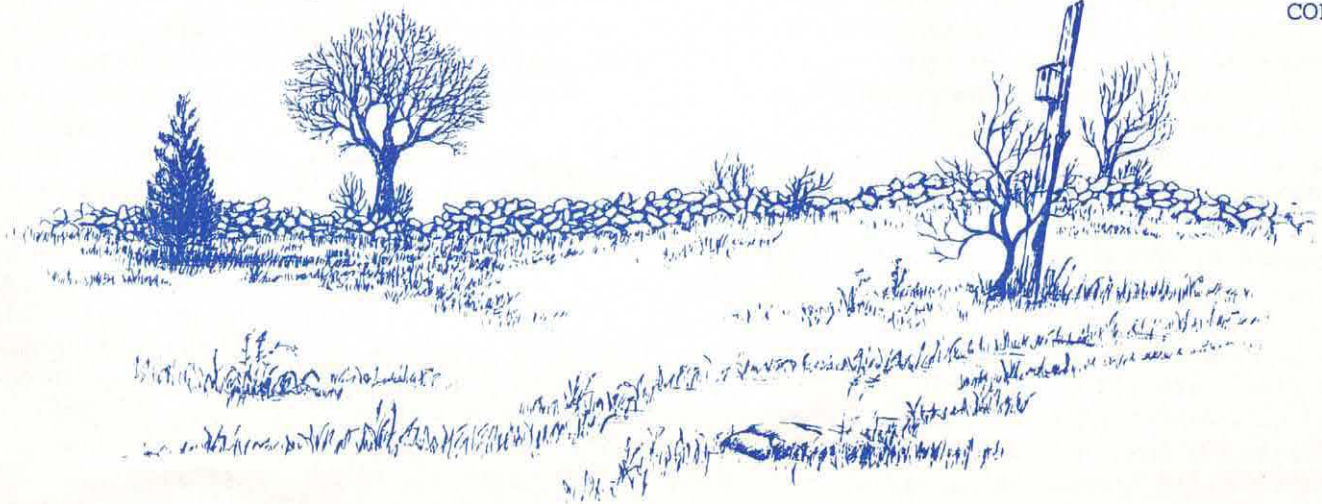
Indians brought fire with them as they migrated over the land bridge and across the continent toward the Atlantic. Explorer Verazano noted from his ship anchored in the East passage the glowing coals of many fires burning over the landscape of Aquidneck Island in the 16th century. With fire, Indians created an environment that was favorable to their kind of existence. Indians used fire to drive game animals toward hunters. Fire, by clearing brush

SPRING, 1983

and forest away from villages, protected Indians from warring neighbors. Indians burned out undergrowth and expanded prairie areas to encourage the presence of deer, buffalo, caribou, and other herbivores. Most important to the passage of forest land to prairie was the practice of swidden, or slash and burn, agriculture. Heavy feeding crops such as maize and yams eventually depleted the soil of available nutrients even with annual burnings of remaining plant matter. Indians burned down new plots of forest and moved their gardens onto the ashy soil. These techniques survive today in parts of West Africa and South America. The fires of this primitive practice show up on satellite photos.

Though Indian fires were generally locally confined, the multiplied result of many villages practicing swidden agriculture and fire hunting was the opening of large tracts of previously forested land. If Indians had any major ecological effect on the new world, it was one of replacing forest with grassland, or where forest persisted, of opening the forest up and clearing it of undergrowth. The effect on plant and wildlife populations was dramatic. American bison had wandered East of the Mississippi by the 16th century and were found in Massachusetts and Maine along the eastern seaboard by the 17th century.

CONT



Fire, cont.

Aquidneck Island may have supported bison during that time.

Settlers found a new world rich with grassland and open forest-loving game, and they learned how to manage the habitat from the Indians through manipulation of fire. As new settlement populations increased and industries began, however, the demand for forest products increased. Suppression of fire became a primary concern. The squirrel who traveled from the Atlantic Ocean to the Mississippi without touching the ground can thank, in part, the rise of the industrial revolution and the absence of fire.

Fire suppression was among the aims of the U.S. Forest Service at its inception. Since then, knowledge of the ecological role of fire as a mechanism of biological degradation has grown, as has knowledge of ecological relationships within forest and prairie communities. "Some organisms have adapted defensively to protect against the energy released by fire, but others have adapted so as to seize on the nutrients released by fire and have consequently even encouraged properties promoting combustion."

Foresters have used prescribed burning of accumulated fuel to decrease the chances of future fire conflagrations in forested areas. Some fires in primitive areas of the West are now allowed to burn themselves out.

Fire is also a tool of the wildlife biologist. In managing for the Kirtland's Warbler, large tracts of Jack Pine are burned every year in Michigan. Jack Pines' serotinous cones open to release seeds only after intense heat. Kirtland's Warblers rely on the Jack Pine for nesting cover.

In the Sanctuary, Woodcock, Tree Swallows, Meadowlarks, Barn Owls, and Pheasant are among many which require open meadows for either nesting, feeding, or courting. Fire once kept these meadows open and fertilized. Not long ago, other open meadow nesters like the Upland Plover, Bobolink, and Vesper Sparrow utilized open island habitat. Fire increased the percentage of forbs and annual grasses in these open fields and thereby encouraged a greater diversity of birds.

Fire continues to play a role in the management of the Norman Bird Sanctuary. Brush is not yet burned directly out of old fields, but controlled burning of stacked brush has become an annual rite of Spring. A few weeks after the burning, pale green shoots of pioneering forbs and grasses speckle the blackened earth. Fire, the rejuvenator, is back at work again.

SANCTUARY SECRETS

In a small clearing where the afternoon sun floods in and there's shelter from the NW wind stands a stone monument, testament to the poet's and stonecutter's celebration of the Earth.

The stone was cut and erected by John Hegnauer and Fudd Benson. The poem was conceived by Frank Muhly.

With a little looking, you can find the place.



SYNERGY

Volunteers kept the Sanctuary gears well-oiled throughout the winter and into early spring!

Thanks to Virginia Thurman for her miraculous membership organization. To Bev Murphy and Dottie Vissman for filing everything and contacting docents. To Jim Williams and Barry Murphy for organizing and executing a fine decoy carving class. To Morris Hirsch for keeping the 4-H Club going, wet or dry. Thanks to Beverly Webster for typing this Newsletter. To Laura Atwell and Paul Tedeschi for their illustration work, and to cartographer Ed Backus for a new Sanctuary base map.

A special note of appreciation to all members of the Newport Garden Club for their continuing financial support of our wildlife planting projects around the buildings.

Last, but not least, thanks to all in the Youth Volunteer Group: Mark Williams, Kara Laughlin, Aaron Corie, Craig Farmer, John Chubb, Polly Wessick, Tracey Laughlin and Lisa Cohen

--for their Saturday afternoon help, high spirits and mischievousness.

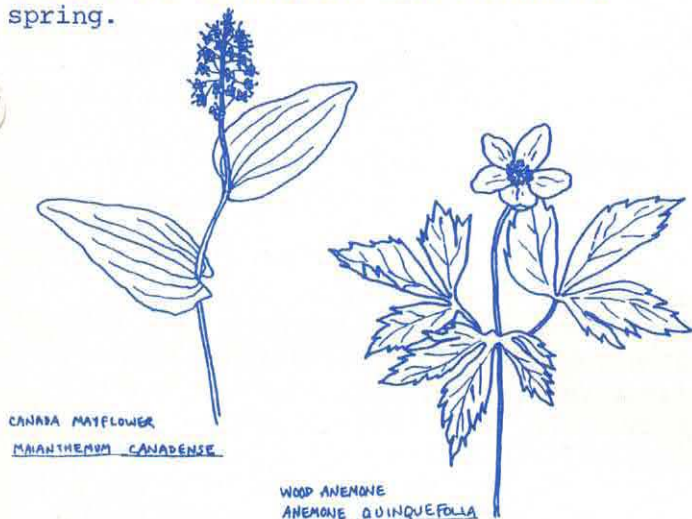
SPRING WILDFLOWERS OF THE WOODLANDS

"It warms the heart to see these brave little flowers stand with their faces to the sun and their backs to the snowdrifts, looking out on a gray-brown world, nodding to it and calling it good."

Anna Botsford Comstock

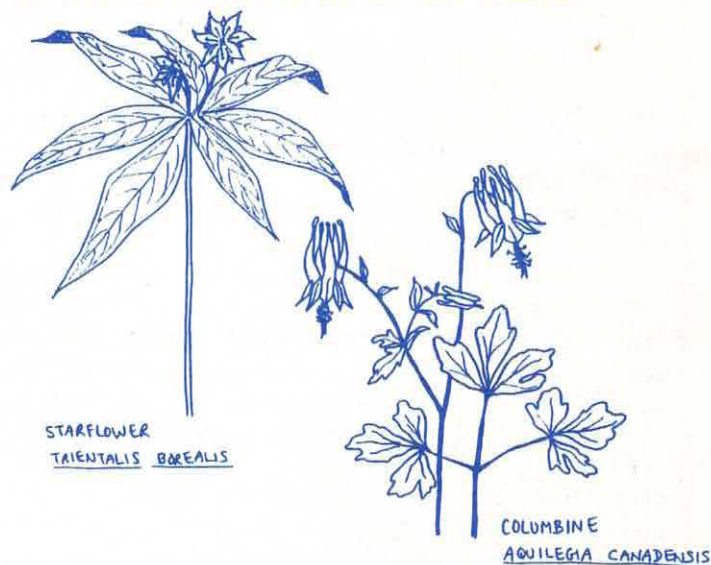
There is a brief period in the woodlands each spring when the soils have warmed to 40°, but the trees haven't yet leafed out so the forest floor still basks in sun. The red-winged blackbirds have returned, the woodcock have been singing each evening, the fields have been slowly showing signs of green, the skunks have been marauding around your yard, and you've seen your first insect; but somehow you're still waiting for that definitive sign, that showy signal that spring has really arrived.

It appears silently, in places not frequented by the average stroller; but the woodland spring wildflowers, here for just a brief few weeks, are that essence of spring.



Aided often by large, fleshy rootstocks, these flowers are able to store enough energy over the winter to blossom early, before their new leaves have produced much food. Controlled largely by soil temperature (as opposed to day length-controlled plants such as dandelions and bluets), they are able to gauge just the right moment to appear. Unlike the delicate blossoms of the apple, many of these early blooming forest wildflowers are frost-hardy, able to withstand temperatures down into the teens with only a slight browning on their leaf edges. To the insects which pollinate them, they generally offer pollen instead of nectar, as many insects prefer pollen at this time of year to produce their young.

Adaptations such as these allow these small flowers to fill a special niche in the forest, taking advantage of a brief growing space unavailable to other plants. Just as the woodcock's eye placement, flexible bill, and short wings suit him to his worm-eating lifestyle, and the owl's eyes, wings, beak and talons suit him to silent night hunting, so the woodland spring wildflowers' adaptations suit them to their existence in the only time of warmth and sunlight the forest allows. Though they are all perennials, hardly a trace of many of them remains later in the summer.



Like much of the southeast coast of New England, the Sanctuary's woodlands aren't ideally suited to a large variety of spring flora, but those we have make an impressive show. Beginning slowly, the first wildflower of spring is the skunk cabbage, the tiny blooms cloaked in a purple mottled spathe. Skunk cabbage, named for its distinctive odor, can usually be found in the swamplands below Red Maple Swamp Pond by the end of February. This year, however, they were visible as early as November, bravely looking toward spring. Some reports have it that skunk cabbages can even produce their own heat from root reserves, to melt away some of the snow around them and let in the light.

By mid-May the ground around the beginnings of all the ridge trails is barely visible in places because of the abundance of white blooms. Most prominent is the Canada Mayflower, or False Lily-of-the-Valley, under 6" high, with two shiny leaves and a spike of small white flowers. Later in the summer, it produces beautiful tiny mottled red berries, whence the origin of its other name, "bead ruby."

CONT

Wildflowers, cont.

Wood Anemones greet you just as you step off the Maple Swamp Pond Bridge on a May walk. You can also look for these slender stemmed white blossoms, sometimes called "windflowers," growing abundantly along the Gray Craig Trail. The delicately pointed Starflower is most easily found in the Cedar Release area of the Hanging Rock Trail. In the same family as Skunk Cabbage, the Jack In The Pulpit can be seen in the wet area of the Interpretive Trail.

Perhaps the showiest of the Sanctuary's spring woodland wildflowers is the Wild Columbine. The resemblance of this bright red and yellow blossom to the claw of a bird didn't go unnoticed in either its common name, which is derived from "columba," the dove, or its scientific name, *Aquilegia*, which probably comes from "aquila," the eagle. The Wild Columbine, which in the Sanctuary is found only on one of Gray Craig's sheltered ledges, perhaps best epitomizes the delicacy of all the woodland spring wildflowers. Wilting quickly if accidentally picked, and rarely surviving a transplant, the Wild Columbine, like all these delicate species, is best studied and enjoyed in its natural setting, as a subject of photography, watercolor, poetry, or just simple observation.

If you are interested in learning more about the spring wildflowers of the Sanctuary's woodlands, please join us for a program and guided walk on May 15 at 2:00.

COMING EVENTS

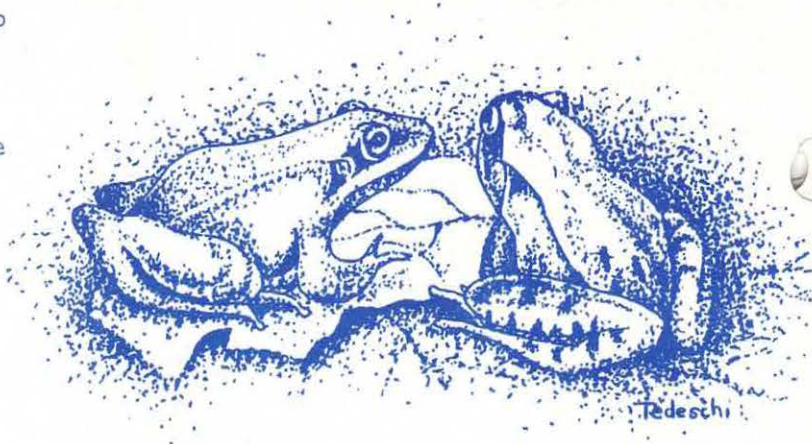
The Advisory Committee is proud to announce the appointment of Christine Callahan to the chair the Ninth Annual Harvest Fair, to be held Oct. 1 & 2, 1983.

The Harvest Fair is an old-fashioned country fair held annually to raise funds for programs at the Sanctuary. As in past years, the Fair will feature home and garden demonstrations, exhibits and contests, a Country Store, and crafts tent, as well as games, entertainment, and field competitions.

A lamb roast dinner will be held on Saturday evening followed by folk dancing under a Harvest Moon.

The Fair Steering Committee has met and plans are under way for an exciting fair. Your volunteer help will be greatly appreciated. Come to the volunteer potluck on June 10.

Nature Day Camp and Summer Challenge for Summer 83 will be better than ever before. Call the Sanctuary for information concerning these summer programs.



CREATURES OF THE POND

"A small, stout little mouse with a very short tail, and brownish-gray fur." Seen and heard late last summer crunching water parsnip stems growing in Maple Swamp Pond, and again for an hour in March as it scurried around the same wetland. What is it?

Chris Powell, biologist at Salve Regina, thinks possibly a Southern Bog Lemming, *Synaptomys cooperi stonei*. The Southern Bog Lemming is believed to inhabit the bogs, swamps, marshes, and wetlands in old growth forest in our Southern New England coastal plain. Only one other record of this lemming exists--a 1961 record from West Kingston, Rhode Island.

Could it be?

The wet nights of mid-March brought spotted salamanders to the temporary ponds of the refuge. Spotted salamanders, *Ambystoma maculatum*, live their entire lives under the earth, coming up only once a year in a cyclical return to the ponds of their birth for mating. The annual rite was observed on March 18, at midnight, by several vinyl-coated Sanctuary staff. It was a joyful, if somewhat sodden, observance. Spotted salamanders grow to be up to 8 inches long. Bright yellow dots adorn their dark, slick backs.

On March 14, the staff had only to walk 30 feet out of the office to witness the flight of a sole woodcock, *Philohela minor*, up over the dark hedge line and into the fading light. Woodcock are attracted to the Sanctuary's abandoned fields and wet meadows for their Spring courtship flights and summer nesting. The shy wormfeeder is a marvel, able to see 360 degrees without moving its head at all and able to detect worm vibrations with their bills.

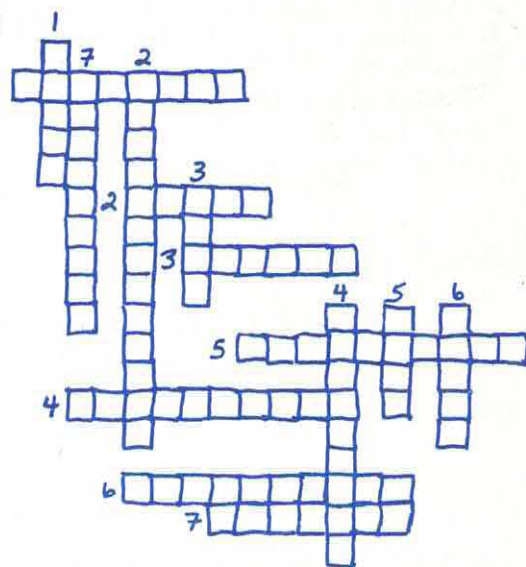
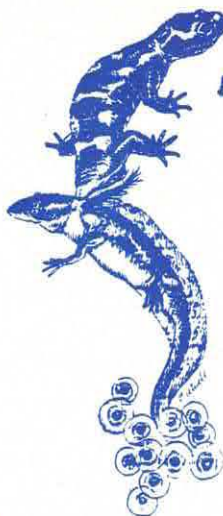
Power to the woodcock!!

KID'S CONNECTION...WITH HERPS

HER-PE-TOL-O-GY: The study of reptiles and amphibians, their structure, classification and habits.

DOWN

1. The general name given to reptiles and amphibians.
2. Salamanders, toads & frogs eat insects. They are _____.
3. In general, herps are born from _____.
4. All herps sleep during the cold winter months.
5. All herps are _____ blooded.
6. _____ as adults live on land; frogs are water dwellers.
7. This common turtle is known by its bright red and yellow patterns.



ACROSS

1. Animals whose bodies are covered with scales or plates are called _____.
2. Latin definition of reptile.
3. This snake is commonly seen on lawns and in gardens.
4. The Greek definition of amphibians.
5. Turtles, like humans, eat a diet of both plants & animals. They are _____.
6. Animals whose soft-skinned bodies must remain moist are _____.
7. Tadpoles or _____ are larva of frogs and toads.

Unscramble these words to discover a few of Aquidneck Island's herps:

ikml nkesa

oxb urtlte

nitpade trletu

drecabked smladnrea

rsnigp pepere

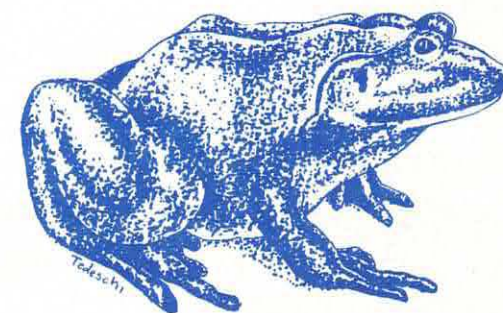
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ANSWERS

7. painted
6. amphibians
5. omnivorous
4. double life
3. garter
2. creep
1. reptiles

7. polliwogs
6. toads
5. cold
4. hibernates
3. eggs
2. insectivorous
1. Herps



red-backed salamander
painted turtle
box turtle
milk snake

OPPORTUNITIES

Volunteer Docent positions available at NBS! No special requirements required, except a few free mornings or afternoons a week through May and June. Docents guide school groups through the Sanctuary during this period. A two-part training course will cover necessary information.

This Spring, let the rewards and challenges of teaching the outdoors be yours for only a few hours of your time a week. Call Beverley Murphy at 847-8559, or call the Sanctuary at 846-2577.

The Norman Bird Flyer is published by the Norman Bird Sanctuary, a non-profit nature preserve established under the will of Mabel Norman Cerio.
Trustees: Louis Lorillard, RI Hospital Trust National Bank
Advisory Committee: Norman Hall - Chair, Patty Vaillancourt, Happy Van Beuren, George Warren, Barbie Sturtevant, Chris Callahan, Fran Holmes, William Horton, Ginny Laughlin, Harriet Phelps, Peter Randall, Barry J. Murphy, Charles, E. Levy, William Rogers, Ginny Purviance
Co-Directors: Deborah Clark, Timothy Traver

NORMAN BIRD SANCTUARY EVENTS

Every Sunday Morning: BIRD WALK. A great way to start a Spring Sunday. Spring birding is the most exciting of the year. These informal walks are open to all ages.

- April 8 WOODCOCK WALK. An informal stroll through the refuge in search of one Spring's most vocal informants. 6:00pm.
- April 9 GARDEN MEETING. Are you interested in vegetable gardening but without the land to garden on? The Sanctuary has available community garden plots. At this meeting gardening guidelines will be reviewed and new plots assigned. Attendance is a must! It's important that all returning gardeners attend also so we know which plots are available. Time: 1:30 pm.
- April 12 STAR WALK. Featuring the Great Bear high above after winter's hibernation, the Spring sky is full of awakening wonders. Our star walks will focus on constellation and star legends from around the world. Dress warmly for the brisk night air. Held weather permitting. Call 846-2577. or 846-2041 for confirmation.
- April 16 GARDENING WITHOUT POISONS. Questions and Answers on gardening without pesticides and insecticides. Learn tips and tricks from folklore and modern science that you can use to maintain your garden's health without poisoning the soil or yourself. Time: 2:00pm.
- April 24 FROGS, SNAKES, TURTLES, TOADS. DEM biologist Chris Raithel will once again lead us into the world of amphibians and reptiles. This walk and talk is geared for all ages. Live specimens will be on-hand for viewing and handling. Time: 2:00pm.
- April 25 DOCENT TRAINING. For anyone interested in guiding school groups through the Sanctuary this Spring. Two sessions of concentrated instruction in the tour formats used for elementary classes. Time: 9:30-11:30 am.
- May 8 MUSHROOM WALK. Spring is the best season for mushroom. This walk will introduce you to some of our more common species. The hunt might turn up some of the edibles too. Time: 2:00pm. Instructor: Jan Goodland.
- May 10 STAR WALK. See above description.
- May 15 SPRING WILDFLOWERS. Each year the forest floor fills with wildflowers for the brief four weeks when the soil is warm, but the trees haven't leafed out, shading the ground. Join us for a stroll through these ephemeral spring beauties. Time: 2:00pm.
- May 21 HERB GARDEN WORKSHOP. Herbs for the epicure, herbs for the medicine chest, magical herbs, and pretty herbs are fun to grow. Space requirements, herb selection, and planting/watering considerations will be the subject of this workshop. Time: 2:00pm. Instructor: Cathy Cotta.
- May 22 BIRDS AND BREAKFAST. A Spring morning of guided walks, slides, bird exhibits and a home-cooked breakfast. Proceeds from this year's program will go toward improving the Eccles Room- our natural history resource room and library. Time: 6:30-10:30am.
- May 28 CONTRA DANCE. Dance in the Barn to benefit the Sanctuary. Caller/musician Peter Leibert from Norfolk Ct. Tickets available at the Sanctuary, at Country Pleasures on 458 Thames St., and at door. Fee: \$2.50 members, \$3.50 non-members.
- June 9 STAR WALK. See above description.
- June 10 HARVEST FAIR VOLUNTEER POTLUCK DINNER. The Harvest Fair is an annual Island event enjoyed by thousands. The organizational potluck dinner, held in the orchard, is a chance for all old and new volunteers to feast together then find out where they are most needed, and you are needed!!! Bring a salad, main course, or dessert for six. Most importantly, bring yourself, friends, and family. Time: 6:00pm.

All above programs cost \$1.00 for Sanctuary members and \$2.50 for non-members, except Sunday morning bird walks which are free to all.



NORMAN BIRD SANCTUARY

583 THIRD BEACH ROAD * MIDDLETOWN, R.I. 02840 * PH: 846-2577

SPRING PROGRAMS

APRIL - JUNE, 1983



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WORKSHOPS AND CLASSES

Landscaping for Wildlife

Properly planned home landscapes can provide life requirements for many native birds and desirous small mammals. This workshop aims to help each participant design his/her own home landscape. A registered landscape architect will be here to give an overview of the principles of design, and the use of plant materials. The workshop will focus on the development of the participants particular site.

Participants will receive instructions, prior to workshop, on how to draw up their site plan. Fee: \$15.00 member, \$20.00 non-member. Date: Saturday 14 May. Time: 9:00am - 2:30 pm. Instructors: Kate Alexander ASLA, and Timothy Traver.

Salt Water Aquariums

This two-part workshop covers the equipment set-up, alternative filtering systems, and maintaining the proper chemical balance of a salt water aquarium. The second part of the workshop will focus on a field trip to the shore for specimen collecting.

Participants must be 12 years or over. Fee: \$10 member, \$15 non-member, plus materials. Date: Saturdays, 4 June, and 11 June. Time: 2:00pm- 5:00pm. Instructors: Lee Gardner, Becky Brady.

Watching Birds

Watching birds, a fascinating and absorbing pastime, can serve as a platform for a general study of the natural world. Watching birds adds a special dimension to any trip, whether it be down to the grocery store or to Alaska. This mini-course will revolve around three Saturday morning field trips in May and June and evening lectures. Fee: \$20 members, \$25 non-members. Date: Wednesday evenings, May 18, 25. Saturday mornings, May 21, 28, and June 4. Time: Evenings: 7:30-9:00pm, Saturday mornings: 6:00-11:00am. Instructors: Timothy Traver, Guest Lecturers.



CHILDREN'S PROGRAMS

Nature Club

A Saturday morning alternative for your child, the Norman Bird Sanctuary's Nature Club is a place where children can safely do things that have always excited their curiosity, under the guidance of a knowledgeable and enthusiastic adult staff. Seven to ten children per instructor. Children learn by doing and have fun at the same time. For children K-6. Time: Saturday mornings 9:00am-Noon. Dates: April 23- May 21. Fee: \$20.00 members, \$25.00 non-members.

Spring Week

Vacation does not need to be an end to fun learning. Enjoy a week of crafts, films, hikes, games, and nature discovery through the Norman Bird Sanctuary. For children in grades K-6. Date and Time: April 18-22, 9:00-12:00. Cost: Members: \$20.00, non-members \$25.00.

Let's Fly a Kite

Explore the winds and weather through the construction of your own kite. Kites will be made out of all recycled paper and personalized by the maker's own painted artworks. Date: April 20, 1:00-4:00. Cost: Members: \$4.00, Non-members \$5.00 (price includes materials)

PROGRAM REGISTRATION FORM

NAME _____ TELEPHONE # _____

ADDRESS _____

SANCTUARY MEMBER _____ NON-MEMBER _____ PLEASE SEND MEMBERSHIP INFORMATION _____

☐ Nature Club Spring Session
☐ Spring Vacation Week
☐ Let's Fly a Kite
☐ Landscaping for Wildlife
☐ Salt Water Aquariums
☐ Watching Birds

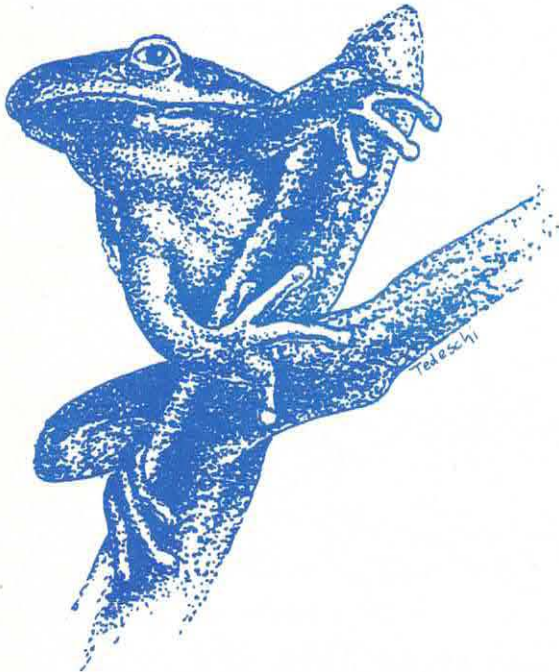
April 23- May 21
April 18- April 22
April 20
May 14
June 4, 11
May 18, 25, 21, 28
June 4

| # Attending | Fee |
|-------------|-------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

Total Enclosed \$ _____

THE REFUGE

Norman Bird Sanctuary is located in the southeastern corner of Aquidneck Island. Its 450 acres, together with the acres of the adjacent Sachuest Point National Wildlife Refuge, protect over 1000 acres of undeveloped lands. Just several miles from each of the island's 3 communities, including historic Newport, the bird sanctuary is a refuge for native plant and animal forms. People find their place here too.



FACILITIES

A working farm from the pre-colonial era, the Norman Bird Sanctuary continues the tradition of resourceful land management. The 200 year old barn, flanked by a water tower, orchard, courtyards, and perennial gardens serves as sanctuary headquarters. Fifteen miles of footpaths have given the sanctuary a reputation throughout the state as a fine place for casual strolling, wildlife observation, and photography.

Sanctuary facilities also include natural history collections, classroom, library, and an animal care area.

The sanctuary functions to preserve a diversity of wildlife habitats. For people it is more than a place to get away for a quiet walk. As a center for learning the refuge serves over 4000 school children every year with nature programs held at the refuge and in the schools. Field walks by professional naturalists, special youth and family programs, and teacher workshops are also held.

DO YOU HAVE A FRIEND OR NEIGHBOR
WHO ISN'T A SANCTUARY MEMBER ?

The Norman Bird Sanctuary
583 Third Beach Road
Middletown, RI 02840

Annual Membership

| | |
|---------------------|-------------------|
| - Individual...\$10 | - Business...\$30 |
| - Family.....\$15 | - Patron....\$100 |
| - Sustaining...\$25 | - Life.....\$1000 |

Name _____
Street _____
City _____ State _____ Zip _____

Contributions and membership dues are deductible for Federal Income Tax purposes.

GENERAL INFORMATION

Trail fees: \$2.00 adult, children under 12 and seniors over 65 free.

Hours: Open 9:00 am - 5:00 pm
Wed - Sun: Fall, Winter, Spring
Daily: Memorial Day - Labor Day
Open holidays. Closed Thanksgiving and Christmas.

Tours: Special programs, group rates, summer camp, workshops:
Please call Sanctuary office,
846-2577

MEMBERSHIP

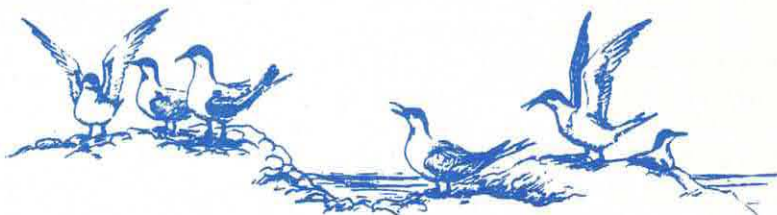
Operating costs are supported largely by family and individual memberships. In turn, the sanctuary is open, free of charge, to members seven days a week. Members are entitled to summer camp and educational program discounts, and they can choose to garden in sanctuary garden plots.

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Properly planned home landscapes can provide life requirements for many native birds and desirous small mammals. This workshop aims to help each participant design his/her own home landscape. A registered landscape architect will be here to give an overview of the principles of design, and the use of plant materials. The workshop will focus on the development of the participant's particular site.

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CHILDREN'S PROGRAMS

Nature Club

A Saturday morning alternative for your child, the Norman Bird Sanctuary's Nature Club is a place where children can safely do things that have always excited their curiosity, under the guidance of a knowledgeable and enthusiastic adult staff. Seven to ten children per instructor. Children learn by doing and have fun at the same time. For children K-6. Time: Saturday mornings 9:00am-Noon. Dates: April 23- May 21. Fee: \$20.00 members, \$25.00 non-members.

Spring Week

Vacation does not need to be an end to fun learning. Enjoy a week of crafts, films, hikes, games, and nature discovery through the Norman Bird Sanctuary. For children in grades K-6. Date and Time: April 18-22, 9:00-12:00. Cost: Members: \$20.00, non-members \$25.00.

Let's Fly a Kite

Explore the winds and weather through the construction of your own kite. Kites will be made out of all recycled paper and personalized by the maker's own painted artworks. Date: April 20, 1:00-4:00. Cost: Members: \$4.00, Non-members \$5.00 (price includes materials)

Salt Water Aquariums

This two-part workshop covers the equipment set-up, alternative filtering systems, and maintaining the proper chemical balance of a salt water aquarium. The second part of the workshop will focus on a field trip to the shore for specimen collecting.

Participants must be 12 years or over. Fee: \$10 member, \$15 non-member, plus materials. Date: Saturdays, 4 June, and 11 June. Time: 2:00pm- 5:00pm. Instructors: e Gardner, Becky Brady.

Watching Birds

Watching birds, a fascinating and absorbing pastime, can serve as a platform for a general study of the natural world. Watching birds adds a special dimension to any trip, whether it be down to the grocery store or to Alaska. This mini-course will revolve around three Saturday morning field trips in May and June and evening lectures. Fee: \$20 members, \$25 non-members. Date: Wednesday evenings, May 18, 25. Saturday mornings, May 21, 28, and June 4. Time: Evenings: 7:30-9:00pm, Saturday mornings: 6:00-11:00am. Instructors: Timothy Traver, Guest Lecturers.

PROGRAM REGISTRATION FORM

NAME _____ TELEPHONE # _____

ADDRESS _____

SANCTUARY MEMBER _____ NON-MEMBER _____ PLEASE SEND MEMBERSHIP INFORMATION _____

| | # Attending | Fee |
|---------------------------------|--------------------|-------|
| ____ Nature Club Spring Session | April 23- May 21 | _____ |
| ____ Spring Vacation Week | April 18- April 22 | _____ |
| ____ Let's Fly a Kite | April 20 | _____ |
| ____ Landscaping for Wildlife | May 14 | _____ |
| ____ Salt Water Aquariums | June 4, 11 | _____ |
| ____ Watching Birds | May 18, 25, 21, 28 | _____ |
| | June 4 | _____ |

Total Enclosed \$ _____

LEAST TERN AND PIPING PLOVER

The Least Tern (*Sterna albifrons*) and the Piping Plover (*Charadrius melodus*), two barrier-beach nesting species of bird, have been subjected to such great stresses during the last century that both can now be considered threatened species in Rhode Island. The population fluxes which have occurred in these two species follow parallel courses. The Piping Plover was during the early nineteenth century well known to naturalists such as Audubon and was considered to be a common summer resident on pebbly strips of barrier beach along the Atlantic coast. In the latter part of the 1800's, most shorebirds, the Piping Plover included, were hunted for food. Several seasons of unregulated shooting so reduced the numbers of this species that it was almost to the point of extinction in North America. Fortunately, hunting was then banned on most of the smaller shorebird species, and the Piping Plover re-established itself in many of its former haunts.

Despite fortuitous legislation which prevented Least Terns and Piping Plovers from declining to extinction, their ordeal was not yet through. In recent years, sprawling beach development, which sucks up suitable beach nesting habitat, and increasing demands by the public on bathing beaches have replaced the historical problems of hunting with these two species.

This apparently black cloud does however have a silver lining, thanks to management practices which have been developed in the last few years. The technique of fencing and posting colonies, coupled with proper patrols, monitoring, and education has turned the tide in many severely stressed colonies. By keeping

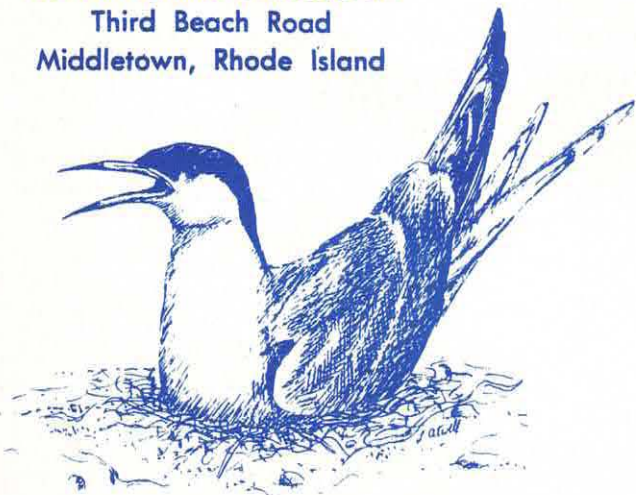
disturbances funneled away from sensitive areas, the terns and plovers are able to nest successfully. Though fencing techniques had been employed in many areas, including Monomoy Island in Massachusetts, it was not until 1982 that the first project of this kind was implemented in Rhode Island. Napatree Point, Westerly, Rhode Island, was the site of the first Least Tern/Piping Plover management project. It was selected because it was a very stressed site, and because the managing agency of the site, the Watch Hill Fire District, was in total cooperation with the plan. In the preceding two nesting seasons, there had been about 25-30 adult Least Terns nesting on Napatree. In both of these years, eight young were fledged. Following the fencing of 1982, about 45 adult Least Terns nested, producing 34 young on site to fledging. The young to adult ratio thus improved from .29 young per adult (1980,1981) to .75 young per adult in 1982. Piping Plover likewise did well in the enclosure, with one pair fledging two young. Another unfenced Piping Plover nest on Napatree got out one young, by contrast.

We are looking ahead to the 1983 nesting season with anticipation. The fencing will hopefully be continued on Napatree, and there are plans by the R.I. Division of Fish and Wildlife to expand the program to include other stressed colonies statewide. Based on the success exhibited at Napatree last season, it seems that what man can take away, man can restore. We owe it to the wildlife and to ourselves to give it our best shot.

Chris Raithel

NORMAN BIRD SANCTUARY

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Middletown, Rhode Island



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