



The Norman Bird Flyer

Volume 15, No. 4

Winter 1994

Like Diamonds in the Sky: Winter Stargazing

Early sunsets and clear nights make Winter the perfect time to stargaze. If you want to learn more about the stars that light the winter sky, a fun way to start is to pick a constellation. Constellations are groups of stars. Since ancient times, people have been imagining them to be pictures of different characters or objects. More often than not, there is a story that goes along with the picture in the sky.

The difficult part about viewing the stars in a constellation is that because the earth is rotating, they appear to move across the sky. The same constellation may be in the eastern part of the sky during the early evening and the western part of the sky later in the night. Also, some stars you are trying to find may not be visible to you if you are stargazing near a town or city or if the moon is bright. Man-made light and moonlight make some faraway stars hard to see.

The best way to avoid problems when you are first starting out is to pick a constellation that has very bright stars. Orion is an excellent winter constellation to get started with. The easiest way to find Orion, The Hunter, is to locate his belt. It is depicted by three bright stars in a straight row. With a touch of imagination you should then be able to make out his shoulders, club, and feet. According to Greek Mythology Orion is fighting a giant scorpion. The two brightest stars in Orion are Betelgeuse and Rigel.

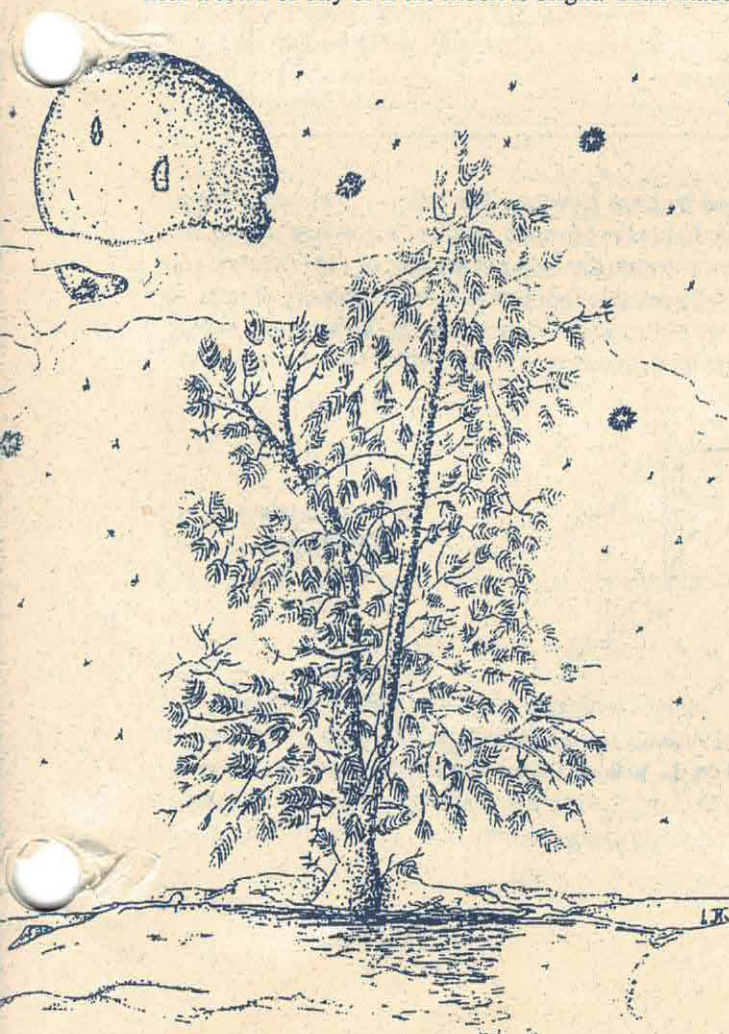
The most shocking sight in Orion is the Orion Nebula. This is a gaseous star cluster. This celestial wonder can be seen with the naked eye and even better with binocular or telescope. The nebula is located just below the belt.

The easiest way to start viewing constellations is with your eyes. Star charts are available that can help you locate the different ones. Once you get to know a few constellations you might want to view individual stars within them more closely. For that, you will need a telescope. The following page has some advice on finding a telescope that is right for you.

by

Karl Lucci

with student contributors to
"Space News", Newsletter of
Gaudet Middle School Astronomy Club



TELESCOPES FOR BACKYARD ASTRONOMERS

by
Kenneth Conca

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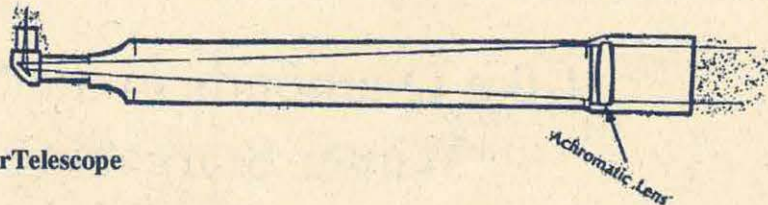
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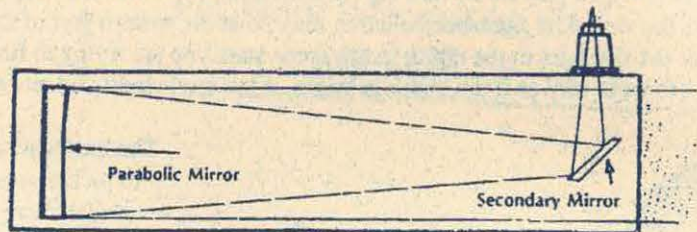


There are three basic types of telescopes that backyard astronomers use to take full advantage of the wonderful sights that belong to our night sky. Each of the scopes provide the backyard observer different views of celestial objects. A telescope buff will most likely have all three types because of the differences of each of the styles.



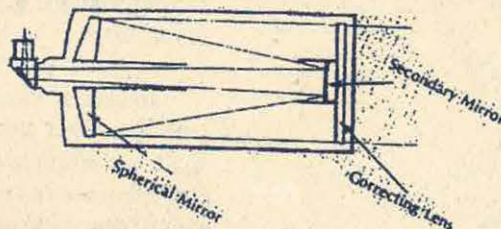
Refractor Telescope

The first type is the **Refractor**, the simplest of the three styles and the one most people think of when a telescope is mentioned. Galileo used a refractor telescope. A refractor telescope has a lens at the front end called the objective and a lens that you look through called an eyepiece. In return for its price and length, a quality refractor delivers crisp images at high magnification, making it excellent for planetary observing. Major lunar and planetary features, bright deep sky objects, and double stars are all within range of a fine refractor.



Reflector Telescope

Second in line is the **Reflector**, invented by Isaac Newton. The reflecting telescope has a parabolic mirror to reflect and converge light rays toward a smaller "secondary" mirror at the top of the tube. The secondary mirror diverts the light out the side of the telescope into an eyepiece. Reflectors are especially suitable for observing faint deep sky objects and for astrophotography. Reflectors are ordinarily costly telescopes. When you compare the apertures of telescope types, you get more telescope for your dollar with the reflector.



Catadioptric Telescope

Finally the **Catadioptric**, also called schmidt-cassegrain telescopes, "SCTs" and the Makusutove-cassegrain. These optical systems use a spherical primary mirror, a corrector lens, and a secondary mirror mounted on the inside of the corrector. The corrector also seals the telescope, eliminating the movement of air thru the tube the same as a refractor. The Catadioptric is the most popular telescope today, because of its portability and its compactness.

Vacation Weeks for Children in Grades K-4

Winter Vacation Week

Public Schools: February 21st - 24th

Spring Vacation Week

Public Schools: April 18th - 21st

Private Schools: March 14th - 17th

Fee \$50 Non-member \$40 Member

Time: 9:30 am - 12:30 pm

Pre-registration and pre-payment are required

Spend a fun-filled vacation week at NBS. Join us for crafts, games, songs and hikes. Come along as we explore the different trails and habitats during these special weeks. Classes fill up fast so don't delay!! Sign up now. Please dress for the weather. A mid-morning snack will be provided. Class size is limited to 15 children.

Children's Story Hour

Dates: Saturdays, Feb. 4th, 18th and March 18th

Time: 1:00 - 2:00 pm

Fee: \$4.00 Non-member \$2.00 Member

Pre-registration and pre-payment are required

Cozy up by the wood stove during the cold winter days while we share a story or two. During our Saturday story hour we will be reading Owl Moon by Jane Yolen, Annie and the Wild Animals by Jan Brett and Just a Dream by Chris Van Allsburg. Don't forget to bring warm clothes for later because weather permitting, we may go out for a short walk. **Sign up for one or all three story hours.**

Spring Egg Hunt For Members Only

Date: Saturday, April 15th

Time: 1:00 pm

Fee: \$7.00 per child \$11 per family

Pre-registration and pre-payment are required

It is time once again to celebrate the return of Spring and warm weather! Come and join us for our annual Spring Egg Hunt. Search the Orchard, Barn and upper trails for chocolate eggs and other goodies. Special "Earth Eggs" will be filled with earth-friendly surprises. Children ages 3-10 may participate in this members-only Sanctuary event. Please bring your own collecting basket. Early registration is suggested for this event.

Owl Prowl

Dates: Adult: Wednesday, January 25th

Family: Thursday, January 26th

Time: 7:00 pm (both family and adult)

Fee \$6.00 Non-member \$4.00 Member

Pre-registration and pre-payment are required

Great Horned Owls and Eastern Screech Owls are active here at the Sanctuary prowling for unsuspecting prey such as voles and mice. They will often respond to mating calls this time of year and may pay us a visit if we can call them in. We will learn about the habits and habitats of these birds while indoors. Then, come join us on this always popular hike through the dark and sometimes haunting habitats of these nocturnal predators. Please dress warmly, wear boots and bring a flashlight.



Winter Stargazing

Date: Tuesday, January 31st (Cloud Date - Feb. 1st)

Time: 7:00 pm

Fee: \$4.00 Non-members Members are Free

Pre-registration and pre-payment required

Winter is here! Clear nights and early sunsets make stargazing easy. Let's meet Orion the Hunter and his famous Nebula plus other characters and constellations that dominate the Winter sky. A great family event. Participants of this program will receive a free star chart.

Animal Signs In Winter

Date: Saturday, January 28th

Time: 1:00 pm

Fee: Non-Members \$6.00/Adult \$3.00/Child

Member \$3.00/Adult \$1.00/Child

FREE for WINTER FESTIVAL BUTTON WEARERS

The animals are out there! Help us search the Sanctuary for tracks, winter burrows and other signs of life. Migrators and hibernaters are hard to find this time of year but there are many active animals, such as red fox and cottontail rabbits, that are still around. The evidence is everywhere. Come and search for the clues! Each participant will receive their own tracking chart to take home.

Programs for Adults

Geology Walk

Date: Saturday, March 11th

Bad Weather Date To Be Announced

Time: 1:00 pm

Fee: \$6.00 Non-member \$4.00 Member

Pre-registration and pre-payment are required

Hanging Rock Ridge has been a curiosity to both geologists and artists for well over two hundred years. Come walk the trails and ridges with us and discover the processes that went into the formation of this ridge and other local landforms. Geological history and theories of the area will be discussed. Two hundred and fifty million years went into the making of our landscape but we'll explore it within two hours. Please wear comfortable shoes and dress for the weather.



Frogs, Toads, Salamanders, Snakes & Turtles

Date: Thursday, March 23rd

Time: 7:00 pm

Fee: \$6.00 Non-member \$4.00 Member

Pre-registration and pre-payment are required

Chris Raithal, Senior Biologist from DEM Fish and Wildlife, will enlighten us with his knowledge of the local frog, toad, salamander, snake and turtle populations (collectively called herps). There will be an exciting lecture and slide presentation and then, if weather is permitting, we will venture down to the pools and ponds to explore for mating salamanders and frogs. Please dress for the weather and wear boots.

Valentine's Day Basket

Date: Saturday, February 4th

Time: 10:00 am - 3:00 pm

Fee: \$26 Non-members \$23 Member

*Additional \$8.00 Material Fee

payable directly to instructor

Pre-registration and pre-payment required

No basket making experience is necessary to create this beautiful heart-shaped Valentine's basket. The basket will have braided gretchen border and lots of Valentine color. Please bring sharp scissors and clothespins.

Snow Shoeing Workshop & Lecture

Date: Sunday, February 12th

Lack of Snow Date To Be Announced

Time: 1:00 pm

Fee: \$6.00 Non-member \$4.00 Member

Pre-registration and pre-payment are required

Have you ever wished you could walk upon the deep freshly fallen snow? Well here's your chance. Roger Gilman, published snowshoe historian and expert snowshoer, will not only give us tips on how to snow shoe, but he will also demonstrate and "shoe" us his extensive collection of snow shoes from around the world. Bring your own snow shoes or borrow a pair of Roger's or ours for a fun afternoon.

Woodcock Walk

Date: Tuesday, March 21st

Time: 5:30 pm

Fee: \$6.00 Non-members \$4.00 Members

Pre-registration and pre-payment required

Woodcocks are thought to have been made from spare parts of other birds. They do look strange! Yet, for a bird of such weird proportions, they perform a display every spring to match any beautiful and graceful ballet. Experience this spectacle and celebrate the return of Spring with us as we enter into the woodcock courting habitat. The nasal "peent" and aerial displays are not to be missed!

Valentine's Day Moon & Star Walk

Date: Tuesday, February 14th

Time: 7:30 - 9:00 pm

Fee: \$14.00/Couple Non-member (\$7.00 per person)

\$10.00/Couple Member (\$5.00 per person)

Pre-registration and pre-payment are required

Please join Teacher/Naturalist, Karin Lucci for a Valentine's Eve walk under the light of the moon and stars. Along the way, we will enjoy the sights and sounds of the winter woods and fields. The calls of Screech and Great Horned Owls may be heard as they search for a mate this time of year. After the walk we will enjoy the warmth of the wood stove, hot chocolate and coffees and some special sweet treats prepared by Karin's husband, Tony, Executive Chef at Moby Dick's Wharf Restaurant in Westport, Massachusetts.

Sanctuary Blazes New Path for State-Wide Burn Program

Fire is a natural element which throughout time has been a key force in shaping the distribution of plant communities. Many of North America's native plants and natural habitats are adapted to fire. Natural fires speed up the transfer of nutrients bound in dead plant tissue back to the soil where it can be used to support new growth. Frequent fires reduce plant litter which minimizes the chance for an intense, damaging fire. They also help eliminate or reduce invading exotic species that threaten the natural plant community.

This Fall we conducted two controlled burns here on the refuge with the assistance of the RI Fire Management Group. The group consists of land managers from numerous local environmental agencies including the Audubon Society of Rhode Island, the Nature Conservancy, the RI Department of Environmental Management, University of Rhode Island and the US Fish & Wildlife Service. This interagency group first formed in February of 1993 with the purpose of introducing controlled burning as an ecological management tool in Rhode Island. The Norman Bird Sanctuary burns were the first of this program. The project was funded in part by a grant from the USFW Partners in Wildlife program and by in-kind support by the agencies mentioned above.

We hope the burns will act as the ecological equivalent of a natural fire. The primary objective is to restore grassland habitat by reducing woody vegetation, especially invasive exotics such as multiflora rose and autumn olive. Other objectives included: the assessment of burning as a management tool in Rhode Island, public education in the role of fire in ecological management, and training personnel in the techniques of prescribed burning.



URI Botany student, Steve Brownell, conducts preliminary work of inventorying multiflora rose.



Greg Manesto, US Fish & Wildlife, takes the lead laying a wet line as NBS Executive Director, Larry Taft, follows igniting the inaugural burn.

Before burning, we inventoried the frequency of multiflora rose in the two plots. A portion of each unit was left unburned to serve as a control. The two burns were conducted during the growing season which should have the greatest impact in reducing woody vegetation by killing it before the plants have the opportunity to store nutrients underground in the root system. A third burn is planned for the winter season sometime in early 1995. A follow-up inventory will take place during the next growing season to assess the effectiveness of the different burns in controlling the invading rose.

Special thanks to Tim Simmons and Julie Richburg of the Nature Conservancy Mass. Field Office for their help in leading the first burn

Programs For Kids & Families

Preschoolers with Parents

Dates: Wednesdays - See Dates & Themes Below

Time: 1:00 - 2:00 pm

Fee: \$25 Non-member \$20 Member/Session

Teacher: Marilyn Lyell

Pre-registration and pre-payment required

Exploring nature's Winter themes with short walks, simple crafts, stories, and lots of silliness serve as a wonderful introduction to the Sanctuary. Adults are expected to join in the fun! Both participants should dress for the weather.

Session 1

February 8th

Where Have All The
Flowers Gone

February 15th

What Color is a
Red-Tailed Hawk

February 22nd

Winter Weather Is Here

March 1st

A Winter Swamp

Session 2

March 8th

Fossils & Puddingstone

March 15th

The Peaceful Glade

March 22nd

I Love Mice!

March 29th

Sanctuary Silliness

Fledglings

Dates: Wednesdays - Dates & Themes Listed under
Preschoolers with Parents

Time: 9:30 - 11:00 am

Fees: \$25 Non-member \$20 Member/Session

Teacher: Marybeth Hunte

Pre-registration and pre-payment required

Hikes, crafts, stories and games are all a part of this 1 1/2 hour class is designed to continue your child's introduction to nature and the Sanctuary. Each week offers a new theme (listed below) waiting to be explored. For children ages 4 & 5 who have previously participated in our Preschoolers with Parents Program.



KIDS SAVE YOUR SATURDAYS FOR NRS

Saturday Afternoon Children's Programs

2:00 to 4:00 pm

For Children in Grades 2-5

\$6.00 Non-member \$4.00 Member

(Price is per program)

PAPER MAKING

FEBRUARY 11TH

Learn to make your own paper from scratch! You can turn unusable scrap paper and natural plant fibers into a unique gift. What a wonderful way to recycle. Each participant will take home a piece of hand-made paper and directions on how to do this craft at home.

ANIMAL CARETAKING

A BEHIND THE
SCENES LOOK

MARCH 11TH

Have you ever wondered what it was like to take care of and feed the animals that live at the Sanctuary? Here's your chance to find out just what the NBS hawk and owl really eat! Be an animal caretaker for a day.

T-SHIRT DAY!

MARCH 25TH

Get ready for the warm weather by creating your own personalized T-shirt. Learn how to use fabric paints and markers to make your own wearable art. Participants must bring their own white, pre-washed cotton T-shirt for this program.



You Are Cordially Invited

We will be celebrating New Year's Eve elsewhere with our family and friends... and we hope that you will be too. But that shouldn't stop you from "purchasing a ticket" to our First Annual New Year's Eve Un-Party!

We know that you are busy, and don't want to add to the hassles and pressures of the holiday season, but we do need your support through a charitable gift! So, unlike other New Year's Eve parties you may be invited to this season, you won't have to worry about what to wear, what to bring or even worry about getting a babysitter since you don't have to go to this one! Also, unlike many other charitable events this season...

Tickets Are Completely Tax-Deductible in 1994

You get nothing in return...except the satisfaction that you are helping your favorite local wildlife refuge and Environmental Education Center. If you wish, you may designate that your ticket price go directly toward the funding of NBS's new video, "Stewards of the Earth". Though the video was 70% funded by Foundation grants we still need to raise \$4,000. As a special thank you, donors will receive an invitation to see the video later in this winter season. Please use the form on the registration page to purchase your tickets to this wonderfully exciting Non-Event and get ready to celebrate New Year's Eve anywhere you want... (but not here)!

BEST WISHES for the HOLIDAYS & HAPPY NEW YEAR!

Sanctuary Video Completed!

The Sanctuary has completed production of it's educational video, "Stewards of the Earth: An Introduction to the Norman Bird Sanctuary." The video introduces environmental concepts to children and adults. It will accompany the Sanctuary's educational staff during in-school visits to 4th grade students. The video debuted at this year's Harvest Fair and will later be available for purchase in the Sanctuary's Barn Owl Shop.

The video is financially supported by the Rhode Island Foundation, the North Family Trust and your membership contributions.

Welcome to Our New Members

Student

Meg Benigno
Dan Rubel

Individual

Mary A. Anderson
Jo Ann E. Andrews
Claude T. Bergeron
William Bogle
Danielle Campbell
Dorothy W. Chase
Isabel Coyle
Eve Crimmins
Robin Delafield
Karen S. Derbert
Joseph Dwyer
June Evans
Cleone T. Graham
Marc Heflich
E. Ann Jaguar
Beth Jepson-Fuhrmann
Mil Kinsella-Sullivan
Richard Koziara
Mariam Alexanian Lavoie
Michael Marshall
Todd Morgan
Charles M. Nystedt
David Picozzi
Frank M. Porter
Virginia Ross
Richard J. Smith
John J. Sullivan
Robert L. Tannert
Paula A. Tate

Timothy Wasco
Charles F. Weishar
Carl J. White
Mark Yeomans

Family

Mr. & Mrs. Richard Albaugh
Susan A. Anderson & Family
Fred Baechtold & Family
Thomas Barron
Mr. & Mrs. Daniel Bence
Mr. & Mrs. Norman Bergerson
Bill Berkowitz
Mr. & Mrs. Kevin R. Buck
Donna Buehler
Mr. & Mrs. Phillip Bess
Mr. & Mrs. John Bird
Robert Bishop
The Botelho Family
The George Botelho Family
Mr. & Mrs. Bob Brooks
Sara Z. Bryan & Family
Kevin Burke
Mr. & Mrs. Timothy Burns
Mr. & Mrs. Stephen Carter
The Barry W. Clark Family
Bruce Crabtree
The Gary Crosby Family
David Dobrott
Amanda Duckworth
Edward P. Dunn, III

Mr. & Mrs. Jeff Fullerton
Mr. & Mrs. Tom Gieseke
R.T. Gillbane
Heather Nichols & Tom Gough
Jen Graves
Christopher D. Greene
Robert Grimes
Colleen Hanley
Maryhelen Harrison
Mr. & Mrs. Michael Hebert
Mr. & Mrs. George Heintz
Jenny Hemmalin
Mr. & Mrs. Peter R. Holtman
Nancy Johnson
Mr. & Mrs. Steve Kirby
Deborah Krupski
The Robert Kullas Family
Gary Marsden
Harold H. McFaden
Mr. & Mrs. Barry McGoff
Christopher J. Mey
Mr. & Mrs. Bruno Paulmier
Mr. Leo J. Peck
Mr. & Mrs. George C. Perry, Jr.
Dick Piech
David E. Ruppel
The J. Mark Ryan Family
Mr. & Mrs. Jonathan Samit
Mimi Samour
Jennifer Shannon
Brenda Sharpe
The Sieminski Family

Lynn Smith
Jane Spotteck
Robert Sucsy
Teri Sullivan
Mr. & Mrs. Brian Sullivan
Robert Swift
Ken Thomas
Steven Thompson
Mr. & Mrs. Merton Wagner
Paul Walczak
Quentin Warren
Mr. & Mrs. Michael Whitty
Carolyn Wilke
Mr. & Mrs. Brian Williams
Linda Cooper & Dick Yeaw
Mr. & Mrs. Henry Young

Contributing

Terry Gallagher

Sustaining

Michael M. Gooding
George H. van Sciver

Patron

Jane Garnett Booth

John Edick

PLEASE JOIN US ! NBS Membership Form

To become a Sanctuary member, or to renew a membership, please check the appropriate category and include membership dues in with your program registration check. Thanks for your support !

☐ Student (\$10) ☐ Individual (\$20) ☐ Family (\$30) ☐ Contributing (\$35)
☐ Sustaining (\$50) ☐ Institution (\$100) ☐ Patron (\$100) ☐ Supporting (\$250)
☐ Benefactor (\$500)

Name of Member: _____
 Address: _____ Town/City: _____ Zip: _____
 Phone: _____

Please make checks out to: Norman Bird Sanctuary
 Send to: 583 Third Beach Road, Middletown, R.I. 02842

TOTAL AMOUNT ENCLOSED: _____

REGISTRATION FORM

■ We can now accept payment for
■ programs and membership by
■ cash, check or MASTERCARD/
■ VISA
■

Please complete and return with payment for program registration. If you need more space for additional registrants, please copy this form.

Name : _____ Grade : _____
Address : _____ Age : (if child) _____
Town : _____ Phone: Home : _____ Work : _____

	Program Title	Date(s)	Program Fee
1.	_____	_____	\$ _____
2.	_____	_____	\$ _____
3.	_____	_____	\$ _____

TOTAL PROGRAM FEES:
TOTAL FEES ENCLOSED:

PARENT EMERGENCY AUTHORIZATION

(Needed for programs lasting 3 hours or more)

Child's name : _____ Parent or Guardian: _____
Phone Number(s) where we can reach you during program hours: _____
Neighbor or Relative: _____ Phone: _____
Doctor: _____ Phone: _____
Allergies/Medications/Special Needs: _____

Waiver: In the event that I cannot be reached in an emergency, I hereby give my permission to the Norman Bird Sanctuary's staff or medical personnel to take emergency measures as necessary.

Parent Signature: _____ Date: _____



Un-Party Ticket Order Form

Name: _____
Address: _____

Please send me _____ 'ticket(s)' to the
1st Annual New Year's Eve Un-Party

_____ Yes I would like my donation to
go toward "Stewards of the Earth"

Total Enclosed \$ _____

About The Flyer...

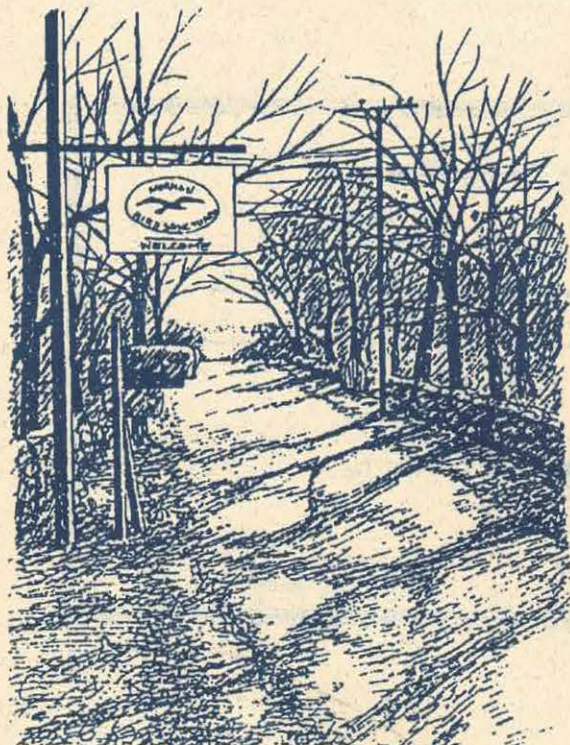
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Susan VanDerhoof

Graphics:
Lisa Kay
Lucia deLeiris
UMD Illustration Students



NORMAN BIRD SANCTUARY
583 Third Beach Road
Middletown, RI 02842



Our Mission

To preserve the 450 acre Norman Bird Sanctuary for the protection of animals and birds and for the enjoyment of the public; to assist the Trustee in the overall management and development of the Sanctuary; to conduct programs for children and adults in environmental education and natural sciences; to work with individuals and groups in the region in the preservation of natural habitats and open space.

Winter Hours

Tuesday - Sunday 9 am to 5 pm

Closed

Christmas & New Year's Eve at 1:00 pm

Christmas Day

New Year's Day

For More Information Call
846-2577

Non-Profit
Organization
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Permit No. 43

To Current Resident or

Attention Sunday Morning Birders!

The Sunday morning guided birdwalks with the Sanctuary's Executive Director, Larry Taft, are discontinued for the winter and will start again on Sunday, April 2nd!