



## The Norman Bird Flyer

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Spring 1998

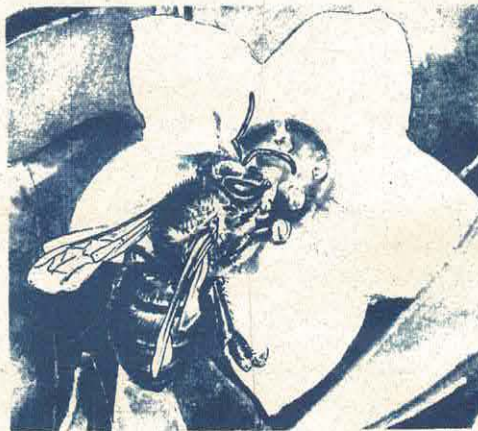
### *Not Just Honeybees Do It: The Other Pollinators*

Nature has many wild workers. When watching insect activity around my flowers last spring, I missed the honeybees but hoped they would come buzzing around. I saw very few, because--as I found out later--their population had been devastated by a mite, but as I watched for them, I made a wonderful observation: Plenty of pollinating was still going on. My flowers were blooming, my vegetables fruiting. What was doing it?

I saw many other kinds of bees: Robust hairy bumblebees, small mining bees, and leafcutter bees. Metallic-hued sweat bees, bee-mimicking flies, butterflies, and beetles were also hard at work. I began realizing what was happening. Though beekeepers' colonies had been handling pollination, when mites afflicted the honeybees, nature sent its second-stringers, and bountiful harvests still came in.

#### *How Does Pollination Happen?*

Pollination, a fortunate by-product of insects' nectar feeding and pollen collecting, is essential to the continued existence of many plants. When insects reach for the sweet juice of flowers that they need for food, they walk all over the flower parts, actively and passively collecting pollen and transporting it to other flowers.



Honeybee  
*Apis Mellifera*

Pollination is a necessary prerequisite to fertilization; without it, a plant will not set seed or fruit. It occurs when insects move pollen from the (male) anther of one flower to the (female) stigma of another flower. Two-thirds of all flowering plants depend on pollinating insects for this service. More than 3,800 species of bees exist in the United States, and most of them collect nectar and pollen. All adult bees eat protein-rich pollen and feed it to their young. In addition to insects, some birds, bats, and other



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(Article cont'd from pg. 1)

mammals pollinate. Wind and water also transport pollen, but here my focus is on insect pollinators. In recent years, the *Varroa jacobsonii* mite destroyed honeybee populations in many regions of the Northeast and central Midwest (Illinois, Iowa, Kansas, and Nebraska). Foulbrood, a bacterial infection that kills bees' larvae, and several other diseases and parasites also afflict colonies, despite the worker bees' attempts to remove infested brood in the hive (scientists call this hygienic behavior). When honeybee populations suffer, honey production goes down, and pollination of cultivated crops is in jeopardy.

### *A Guide to the Pollinator Bees*

Besides honeybees, pollinators include several other bee species, as well as insects that have filled the gap left by dwindling honeybee populations.

**Honeybee (*Apis mellifera*).** Europeans who knew the honeybee as an effective, broad-dieted, relatively docile, and easily managed pollinator--as well as provider of honey and beeswax--brought it to the New World. Since its introduction, the honeybee, also called the domesticated bee, has become common and its habitat widespread.

Honeybees are social. Many of them exist together to support the whole colony in which the queen is the central member. A colony consists of 40,000 to 60,000 honeybees. Sterile worker females do most of the colony's work, caring royally for the queen; her sole purpose is to lay eggs. "Busy as a bee" means busy indeed. The workers build the honeycomb, tend the queen (*always* turning to face her when she passes by!), feed pollen to the young, clean the hive, forage for nectar and pollen, and convert the nectar to honey in their stomachs.

Worker bees also guard the entrance to the hive, scout for new food sources, and communicate to other workers information about new flowers and the richness of the nectar



Bumblebee  
*Bombus ternarius*

supply. The drone males aren't effective pollinators. Their sole function is reproduction, and when their mating duty is complete, they are ousted from the hive or killed by workers.

Most honeybee colonies live in man-made hives that can be moved from crop to crop for specific, managed pollination. The high number of bees in a colony makes their work significant. If a colony becomes too crowded, workers will swarm, separating from the first hive with a new queen. Then, they will build a new hive in a different location. If that colony escapes into the wild, the colony is called *feral*. If the new colony chooses an empty hive provided by an alert beekeeper, the beekeeper will have added nicely to his or her population of domesticated bees.

**African honeybee.** The recent incursion of the Africanized bee into the United States is another worry to beekeepers. In 1956, an African subspecies of the honeybee, *A. m. scutellata*, was introduced into Brazil. The African bee looks just like the honeybee we know, but in tropical regions it is an even more effective pollinator and honey producer than the domestic honeybee. South American beekeepers

(Article cont'd on pg. 8)



# Environmental Programs

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## Preschoolers with Parents

Ages: 3 - 5 years  
Day: Wednesdays  
Dates: Session 1: April 1, 8, 22, and 29th  
Session 2: May 6, 13, 20 and 27th  
Time: 1:00 - 2:00 pm  
Fee: \$30.00 non-member  
\$25.00 NBS Member

*Pre-registration and pre-payment required*  
**CHILDREN'S PROGRAM**

Explore nature with short walks, simple nature crafts, stories, songs and lots of joy and silliness. Parents are guaranteed to have fun too. These are one-hour programs once a week for four weeks. Please be sure to dress for the weather. Choose your session(s) from dates provided.

## Animal Care and Awareness

Ages: K - 4th grade  
Day: Saturday  
Date: May 2nd  
Time: 1:00 - 4:00 pm  
Fee: \$8.00 non-member  
\$6.00 NBS Member

*Pre-registration and pre-payment required*  
**CHILDREN'S PROGRAM**

**LIVE ANIMALS** . . . Come for the afternoon and learn more about domestic and wild animals like dogs, cats, turtles, hawks and more. NBS along with the Potter League will host a program on wild and domestic animals. The Potter League will emphasize the responsibilities involved with caring for cats and dogs. Secondly, Teacher Naturalist M.R. Guido will introduce program participants to the NBS resident animals. M.R. will also discuss rehabilitation of wild animals, encounters, captivity and the imprinting of wild animals that reside in our region.

## Spring Vacation Week

Grades: K - 4  
Days: Tuesday - Friday  
Dates: April 14th - April 17th  
Time: 9:00 - 12:00 noon  
Fee: \$50.00 non-member  
\$40.00 NBS Member

*Pre-registration and pre-payment required*  
**CHILDREN'S PROGRAM**

Look for signs of Spring as nature wakes from her long Winter nap. Children will have a great time exploring trails, playing games and learning new nature crafts. Classes fill up fast, so don't delay! *Please dress for the weather and bring a healthy snack.*

## Spring Egg Hunt For Members Only

Ages: 3 - 10 years  
Day: Saturday  
Date: April 4th  
Time: 1:00 pm  
Fee: \$5.00 per child

*Pre-registration and pre-payment required*  
**FAMILY PROGRAM**



The date is getting close so sign up now! Our annual Spring Egg Hunt is always great fun. Children enjoy searching the orchard, barn and upper trails for chocolate eggs and other goodies. Special *Earth Eggs* will be filled with Earth friendly surprises, too. Please bring your own collecting basket.

*Mark It On Your Calendar*

**Wild Plant Walk**

*June 17th*

*Look for details in our next newsletter*



(Programs continued)

## Songs & Stories: Tall Tales and Fun Songs by the Fire

Ages: All  
Day: Friday  
Dates: June 5th  
Time: 6:00 - 8:00 pm  
Fee: \$8.00 non-member  
\$6.00 NBS Member



*Pre-registration and pre-payment required*  
**FAMILY PROGRAM**

Looking for family entertainment on Friday evenings? Gather around the campfire with Norman Bird Sanctuary staff members M.R. Guido and Fred Orwiler under the evening Spring sky! Sit back, listen and laugh while Fred weaves his tales and M.R. sings her sweet acoustic melodies. Of course, the evening wouldn't be complete without marshmallows for toasting!

## Wild Medicinal Herb Series with Hap Morgan

Dates & Topics:  
April 21: Herbal Medicine Making  
May 19: Herbal Cosmetics for Women & Men  
June 24: Herb Walk  
July 7, 14, 21, 28: Herbs and Natural Healing  
(4 part series)  
August 12: Wild Edibles

Throughout the spring and summer, Hap is leading a variety of classes for everyone from beginners to knowledgeable herbalists. Choose one or many topics. Wildcrafting techniques will be discussed for the proper gathering and storing of herbs. Handouts of local herbs and herbal recipes for salves, liniments and teas will be supplied. Fees and times vary, please call the Norman Bird Sanctuary at (401)846-2577.

## Basket-Weaving with Sharon Culberson

Ages: Adult  
Day: Saturday  
Dates: May 9th  
Time: 12:30 - 4:00 pm  
Fee: \$35.00 non-member  
\$30.00 NBS Member

*Pre-registration and pre-payment required*  
**ADULT PROGRAM**

A great workshop for you to do with your Mom on Mother's Day Weekend. If you have never made a basket before but would like to learn the basics, this is the class for you. Participants will make a simple basket to gather strawberries, herbs or flowers. Sharon Culberson of Hilltop Gardens will lead this start to finish. *All materials are included.*

## Rocky Shore Ramble

Ages: All  
Day: Saturday  
Dates: June 13th  
Time: 9:00 - 10:30 am  
Fee: \$8.00 non-member  
\$6.00 NBS Member

*Pre-registration and pre-payment required*  
**FAMILY PROGRAM**

Come learn about sealife on the rocky and sandy shores of Third Beach. Fred Orwiler, Education Coordinator, will show parents and children alike fun activities they can enjoy together at the beach . . . beside sunworshipping! Participants will also learn the names and behaviors of commonly found species in these habitats. A hand-out of great family beach activities will be distributed. Please wear shoes that can get wet and sunscreen. Children participating must be accompanied by an adult.





# EARTH DAY EVERYDAY!

**Earth Day Celebration**  
**Saturday, April 18th**  
**9:00 am to 1:00 pm**

## Opening Ceremony



*Begin Earth Day by celebrating its beauty! Join Strong Woman of the Aquidneck Indian Council and the reknown Wolf Tale Drum Singers for a "Healing the Earth" ceremony. This one-hour introduction to our cleanup reinforces why we need to maintain the health of this planet. Listen and participate in the ceremony; then with energy and enthusiasm, break off into work groups for the clean-up in various sites around the Sanctuary, Middletown and Newport.*

## Clean-up

*Norman Bird Sanctuary is teaming up with Timberland of Newport for this year's Earth Day Clean-up. We will supply the 30 gallon paper trash bags (so enviromentally correct!) and refreshments. The Norman Bird Sanctuary and the surrounding Third Beach and Hanging Rock Roads are scheduled to be cleaned. Let's all pitch-in for Earth Day 1998! Please call the Sanctuary and confirm your participation. Thank you! **NOTE:** We advise wearing long pants, a long sleeve shirt, and gloves.*

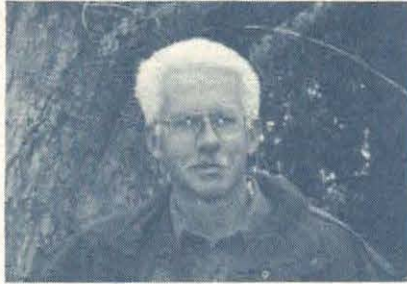


## REGISTRATION INFORMATION

Unless stated otherwise, pre-registration is required for programs. Fees for programs requiring registration must be paid in advance by cash, check or Mastercard/Visa. Registration can be made by mail or by phone (with credit card payments). **Fees will be refunded in full up to five days before the program. With less than five days notice, fees will be refunded only if you can be replaced with a person from the waiting list.** Please use the registration form if registering by mail.



## VOLUNTEER PROFILE



Have you noticed the gradual clearing of brush from the stone walls around the Sanctuary--and the slow process of rebuilding those walls? In great part, the resurrected walls are a tribute to Walter Kosinski; his strong resolve, willingness to lend a hand, complete any task, attention to detail, and thoughtful work ethic.

After graduating from Northeastern University in 1968 with an engineering degree, Walter began working with the Naval Undersea Warfare Center (NUWC) designing undersea military ranges to track underwater vessels and missiles in the Bahamas and on the West Coast. He went on to design, develop and build underwater targets.

He retired from NUWC on January 3, 1997 and doesn't quite understand how people worry about filling their time once they've retired. He finds that he manages to occupy every moment and still not have enough time to complete everything he wants to accomplish. He volunteers with the Boy Scouts by helping on overnight

camping trips and with the Middletown School Committee by refurbishing the Gifted and Talented Program. He enjoys landscaping the 5-acres that he and his family live on in Middletown; he calls it a mini-Sanctuary because of its trails, seasonal stream, pond, and multitude of wildlife. Also, Walter participates in a recreational volleyball league at the Hut.

At the Sanctuary, he contributes to the Properties Committee--a volunteer committee which assists in overall maintenance and planning for the grounds and buildings; indeed, Walter has planted a flower garden, cleared brush, and installed a drainage system. While clearing some of the thick brush from the stone partitions, Walter discovered a stone stile--steps integrated into a wall so that humans could cross but not farm animals.

He has noticed that the stone barriers were built by different hands at different times contributing to the varying styles--some rough hewn and functional, others refined and elegant. And each time Walter tackles a new wall section, he tries to match the style that it was originally built in--reverently observing the unique history that distinguishes the Sanctuary.

When asked what aspect of the Sanctuary that he likes the most, Walter answered with his own question: "What aspect?" he replies--elaborating that he likes many facets--the quiet freeze of winter and the spring days when it seems as if every bird is chirping and singing. Diversity of nature and volunteers like Walter create the spirit that is the Norman Bird Sanctuary.

## *In Memoriam*

*Thank you to those who made donations in memory of . . .*

### **Roland Breault**

Audrey Baima  
Mrs. Bergeson  
Mr. & Mrs. T. Diamond  
Peter C. Dupuis  
Mrs. L. & Rebecca Lavoie  
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Ann & Julie Plourde  
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Mr. & Mrs. Joseph Strasser



## VOLUNTEERS NEEDED

### **Teacher Naturalist Assistants**

Are you a teen looking for something fun and challenging to do during your summer vacation? If you are, then you might want to consider applying to be a Teacher Naturalist Assistant (TNA) with our summer camp program. A love of the outdoors and working with children is all you need. Teacher Naturalist Assistants volunteer for a 3-week session. Call the NBS office at (401) 846-2577 for an application.

### **Youth Conservation Program**

Come be a part of our Summer Youth Conservation program helping to maintain trails improve habitat, monitor nesting birds and other wildlife. A love of the outdoors and a desire to do physical work is all that is needed. Call the NBS office at (401) 846-2577 for an application.

### **Birds & Breakfast**

Do you love to flip pancakes or perhaps you have a special finesse with muffins. If so, then we could certainly use your talents during our upcoming Birds & Breakfast. Volunteers are needed for all shifts to cook and serve breakfast. Call the NBS office at (401) 846-2577 to volunteer.

***Donations of Baked  
Goods Are Also Needed!***



# Sunday, May 17th

A spring morning of guided bird walks, bird exhibits and educational activities for the entire family. After your walk, enjoy a scrumptious breakfast buffet, including egg casseroles, fruit salad, homemade muffins and coffee cakes, pancakes, french toast, sausage and more.



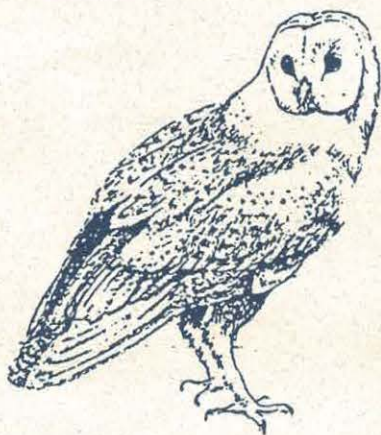
**Birdwalks from 6:30 am until 11:00 am &  
Breakfast Seatings Are**  
7:30 8:30 9:30 & 10:30

**Children's Theatre Performances**  
8:30 9:30 & 10:30

Reservations are strongly suggested and can be made using the registration form on page 11, or over the phone with a credit card.

**Ticket Price**  
Adults: \$8.00 (\$10 at the door)  
Children under 12: \$4.00 (under 3 free)

ALL PAID RESERVATIONS WILL BE HELD AT THE DOOR



## The Barn Owl Shop **SALE!**

**25% Off All Items in Stock &  
Up to 75% Off on Many Selected Items**

Located in the  
Norman Bird Sanctuary Barn  
583 Third Beach Road  
Middletown, Rhode Island

Open Tuesday thru Sunday  
9 am to 5 pm



(Article cont'd from pg. 2)

found, however, that the advantage they saw in the bees' aggressive manner meant that the bees were also far more difficult for humans to manage than domestic honeybees were. The African honeybees are apt to sting fiercely in groups at the slightest disturbance, and they've attacked people and livestock, earning the name "killer" bees. These bees have moved north and are breeding with the domesticated European honeybee race in southern subtropical regions, causing difficulty for commercial beekeepers there. The northern limits of this invasion are not yet known.

**Bumblebee (*Bombus*).** This medium to large-sized insect is covered with black and yellow or orange hairs. Like honeybees, they're social insects with a queen that rules the colony. In the spring, the queen selects a nest site in the ground for a colony of 100 to 200 bees. The site may be an abandoned rodent burrow or a formerly occupied bumblebee nest. The queen first raises workers who tend the hive and colony. They forage, collect and store nectar, and care for the young. Late in the season, males mate with females who will be the next year's queens. Bumblebees are abundant on late flowering ornamentals. Fall cold kills all members except the new queens.

Bumblebees have long probos-

cises (tongues) that enable them to reach nectar in flowers with deep nectaries (plant glands that secrete nectar). Plants such as tomatoes have pollen hidden inside anthers that are like saltshakers, making pollen collection difficult or impossible for most bees. The bumblebee has a specialized technique to actively collect such pollen: It tucks its abdomen under and shakes the pollen out of the flower and onto its body hairs.

Bumblebees are widespread, common, and polylectic pollinators (they will visit many types of flowers). *B. griseocollis* is found throughout the continental United States. Another bumblebee, *B.*



Squash bee  
*Peponapis pruinosa*

*occidentalis* (bottom left), is widespread, and *B. impatiens* is small and common in eastern states, as is *B. ternarius* (shown pg. 2). If you want to attract many species of bumblebees to your garden, leave a clay pot with a hole in the bottom upside down in a garden bed in the spring.

**Squash bee (*Peponapis pruinosa*).** These native wild bees are solitary: They live on their own without a colony, and females lay single eggs in protective cells. Squash bees are specialized: They collect pollen and nectar only from the flowers of cucurbits (squashes, pumpkins, and gourds). In the late 1970's, Vincent



Leafcutter bee  
*Megachile*

Tepedino, research entomologist at the USDA Agricultural Research Bee Biology Laboratory at Utah State University, compared the squash bee's pollination skills with those of the honeybee and found the wild bee to be more efficient, considering frequency of visits and amount of pollen deposited on the flower. Squash bees are up at dawn, well before honeybees are active, so they can reach the squash flowers early in the morning. Other scientists have observed the squash bee (middle left) in a wide range of activities within the flower: Resting, grooming, and mating in the flower structure, in addition to feeding on nectar and pollen. All that activity means more pollen collecting but only for a life span of about 2 months, until the food source is gone. Squash bees are found in most regions of the United States, but not in the Northwest.

**Leafcutter bee (*Megachile*).**

The squash bee isn't the only one with dining preferences. The most famous member of this large and diverse species is the alfalfa leafcutter bee, *M. rotundata*, which was introduced from Eurasia to pollinate alfalfa. Leafcutter bees prefer legume blossoms, and the illustration above shows a leafcutter bee perched on a lima bean flower. This bee collects pollen on a brush of hairs called a



Bumblebee  
*Bombus occidentalis*





Mason bee  
*Osmia ribifloris*

*scopa*, on the underside of its abdomen, rather than on leg hairs.

More than 140 species of leafcutter bees are found throughout North America. Many nest in wood cavities, such as holes left in logs and branches by insects or birds. Some species nest in soil. Females cut circular pieces out of leaves, using their sharp mandibles and bending their bodies downward as they rapidly cut. These bees use the leaf pieces to line their thimble-sized cell. A female leafcutter bee packs a protein rich mixture of pollen and nectar into the cell and then lays an egg. The larva develops in the cell while feeding on the stored food and pupates over the winter inside the lined cell. The adult emerges in spring or summer at just the right time for pollinating.

Growers who provide this bee with a specially designed, open-roofed structure partly domesticate it. Beekeepers place these structures with machine-punched holes in boards to make it easy for the bees to nest. Keepers can remove cells containing eggs and store them in a climate-controlled environment until the bees are needed for pollination.

**Mason bee (*Osmia*).** Mason, or orchard, bees are solitary bees of the same family as leafcutter

bees. A female builds nest cells that are often lined with mud or pieces of flower petals or leaves; she places them singly or in cell groups inside a wooden cavity such as a hollow plant stem or old beetle-emergence hole in dead wood. The illustration to the left shows one species, *O. ribifloris*, alighting on a strawberry blossom. Although this species is found only from the Rockies to West Texas, the habitat of other mason bees ranges throughout the continental United States to Costa Rica. To attract mason bees, blocks of wood or logs with holes that are drilled about 1/4 inch wide and 4 to 6 inches deep provide convenient nest sites when placed in a protected area.

**Sweat bees (Halictidae family).** Though most species of this small bee, found throughout the continental United States, are black or brownish, some, such as *Agapostemon femoratus*, are bright metallic green. All species nest in the ground. Halictids have a range of nesting habits, from dispersed solitary nests to densely situated ones with individual bees sharing common entranceways to primitive social arrangements. Lateral tunnels end in a single cell. Halictid bees



Halictid bee  
*Agapostemon femoratus*

are common insects and good general pollinators. The illustration shows *A. femoratus* perched on a sweet pepper blossom. This bee takes its name from its habit of landing on people to lick the salt from their skin. This bee will sting only if you swat at it. (However, you shouldn't swat at any bee.)

**Alkali bee (*Nomia melanderi*).** This native western bee nests in moist alkaline soils near natural



Alkali bee  
*Nomia melanderi*

seeps and springs. Also a halictid bee, the alkali is easily recognized by its metallic green abdominal stripes. Western scientists and farmers attract this wild bee by building nest sites that simulate natural in-ground nests in alkaline soil. Although alkali bees are solitary, individuals nest near each other. This efficient bee is adept at pollinating alfalfa, clover, mint, onions, and celery.

**Mining bee (*Andrena*).** Many species of mining bees, which are found throughout North America, are important pollinators for a variety of plants. They collect pollen on leg and body hairs and take pollen and nectar to their cells through underground tunnels. All mining bees



are solitary, but some nest in dense aggregations. Its habitat is generally in regions from the Yukon to Nova Scotia and in high altitudes from the Appalachians to the Rockies.

### *Not Just Bees: Other Pollinators*

**Hover flies**, also called **syrphid flies**. Gardeners need practice to recognize these flies because they look just like bees. In fact, that's the key to their protection from predators. *Eristalis tenax* mimics a honeybee, and *E. flavipes* mimics a small



Syrphid fly  
*Eristalis flavipes*

bumblebee. If you look closely when a fly is at rest, it has only two wings, usually held apart and slightly raised from the abdomen. But bees have four wings, sometimes held crossed and flat against the abdomen when at rest. Also, a fly has round eyes and short, thread-thin, barely visible antennae; a bee's eyes are more crescent-shaped, and its antennae are longer, thicker, segmented, and elbowed.

To further mystify predators, the syrphid fly attempts to imitate the bee's behavior. It hovers over a flower or buzzes in erratic patterns over a food source, giving this group their common name: Hover flies. Once you recognize these impersonators, you'll have no fear of being stung,



Soft-winged flower beetle  
*Anthocomus bipunctatus*

because they can't sting. They're effective transporters of nectar and pollen, and you should welcome them to the garden.

**Beetles.** Of the 111 beetle families found in North America, 30 are considered messy pollinators because they tramp all over a flower, feeding and defecating while effectively moving pollen around by picking it up on their hard cuticles and body hairs. The soft-winged flower beetle, *Anthocomus bipunctatus* (shown above), is one of the many beetles that transport pollen.

### **Butterflies and moths.**

Generally, butterflies seek nectar by day, and moths do so by night. They pick up some pollen on their body and leg hairs when they rest and reach into a flower with their long, recoiling hollow proboscises. Some skippers (day-flying butterflies distinguished by their vertical upper-wing position when at rest) jam their hairy faces into a flower and withdraw them covered in pollen. The illustration shows the common branded skipper, *Hesperia comma*, sipping nectar from an apple blossom.

### *The Future*

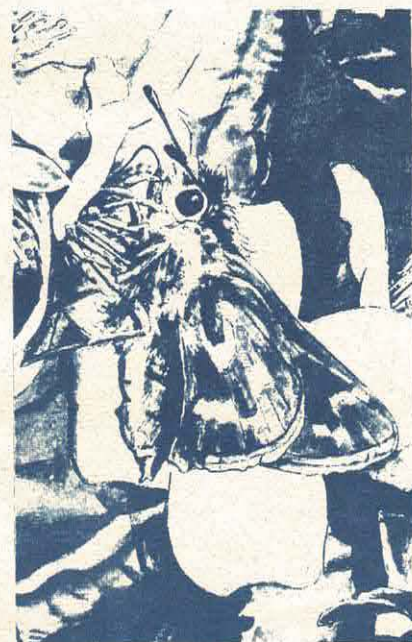
The current but temporary decline of honeybee populations is a perfect time to learn more about other pollinators, particularly when you view pollinators as one of the first links in the

food chain. Whether yours is a fruit, flower, or vegetable garden in a small spot or on many acres, your plants need pollinators. Nature is a dynamic system containing many species, including specialists and generalists, and diversity is an essential part of that system. Because of the decline of the honeybee population, we may find a resurgence of other beneficial insects. They include thousands of species hard at work drinking, walking, buzzing, and stepping all over the flowers, working to meet their own needs as well as those of many plants--and our own, too.

*Authored and Illustrated  
by Amy Barlett Wright.*

Amy Wright thanks  
Terry Griswold,  
research entomologist,  
Bee Biology Lab at  
Utah State University.

Originally published in  
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June 1997.



Common branded skipper  
*Hesperia comma*



# REGISTRATION/MEMBERSHIP FORM

PLEASE JOIN US!  
NBS Membership Form

- ☐ Student (\$10)
- ☐ Individual (\$20)
- ☐ Family (\$30)
- ☐ Sustaining (\$50)

- ☐ Patron/Business (\$100)
- ☐ Supporting (\$250)
- ☐ Benefactor (\$500)
- ☐ Osprey Circle (\$1,000)

## ADDRESS & PAYMENT INFORMATION

Name: \_\_\_\_\_ Phone #: \_\_\_\_\_  
Address: \_\_\_\_\_  
Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_

Form of Payment: **CHECK VISA MASTERCARD**

Card # \_\_\_\_\_ Exp. \_\_\_\_\_

Signature: \_\_\_\_\_

Please Make Check Payable to: Norman Bird Sanctuary  
583 Third Beach Road, Middletown, RI 02842

Program Fees \$ \_\_\_\_\_  
Membership \$ \_\_\_\_\_  
Birds & Breakfast  
\_\_\_\_ # of Adult Tickets \$ \_\_\_\_\_  
\_\_\_\_ # of Child Tickets \$ \_\_\_\_\_

**TOTAL DUE** \$ \_\_\_\_\_

**Please Circle Choice of Seating Time**  
**7:30 8:30 9:30 10:30**

## Please Register the Following:

Name	Age & Grade	Program	Fee
Name	Age & Grade	Program	Fee
Name	Age & Grade	Program	Fee
Name	Age & Grade	Program	Fee

Please list any medical conditions/problems we should be aware of including allergies & medications:

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

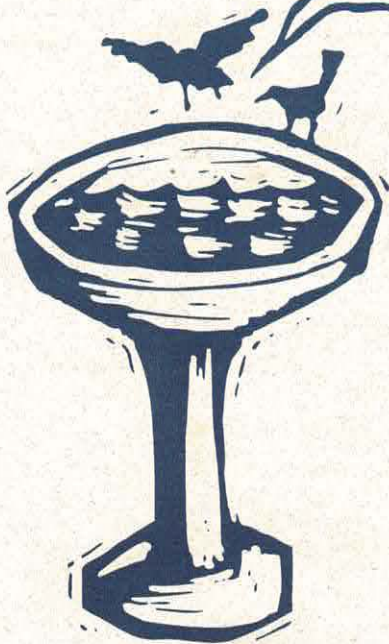
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Norman Bird Sanctuary  
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Permit No. 43

*We can't wait for Birds &  
Breakfast on May 17th!*



TO CURRENT RESIDENT OR

## ASTRONOMICAL SOCIETY VIEWING DATES

*April 10th & 24th*  
6:30 pm

*May 15th & 29th*  
7:00 pm

*June 12th & 26th*  
8:00 pm

*Please join the Astronomical Society of  
Southern New England. They have telescopes and  
knowledge to share with even the newest beginner.*



## SPRING MIGRATION BIRDWALKS

*Starting Sunday, April 5th*

*Join experienced birder, Jay Manning,  
each Sunday morning for a guided birdwalk  
through the Sanctuary. Search for woodland  
warblers, grassland birds and other species.*

*The walks are free and  
begin each Sunday morning at 8:00 am,  
weather permitting.*