



The

# NATURALISTS' CLUB

NEWSLETTER

Springfield Science Museum at the Quadrangle, Springfield, Massachusetts

3Q-2022

## July to September ~ CALENDAR of EVENTS

### JULY

- 13 Wednesday Rice Nature Preserve, *Wilbraham*
- 23 Saturday An Evening Paddle on an Active Beaver Pond, *Otis*

### AUGUST

- 8 Monday Registration Deadline for Stump Sprouts Weekend
- 9 Tuesday Early Morning Paddle on the Chicopee River, *Ludlow*
- 31 Wednesday Facing Rock Wildlife Preserve, *Ludlow*

### SEPTEMBER

- 9-11 Fri. - Sun. Stump Sprouts Weekend, *West Hawley*
- 11 Sunday Appalachian Trail Series: Benedict Pond, The Ledges, *Monterey*
- 18 Sunday Stanley Park Trees, *Westfield*
- 21 Wednesday SEPTEMBER MEETING: What is the Kestrel Land Trust All About?
- 24 Saturday Hiking at Whately Center Woods, *Whately*





# NATURALIST'S CORNER

## Fungi and the Wood Wide Web

John Muir once said “When one tugs at a single thing in nature, he finds it attached to the rest of the world”. Nothing exists alone. Everything is connected. In her book, *Finding the Mother Tree:*

*Discovering the Wisdom of the Forest*, Suzanne Simard describes how trees of the same and different species in a forest are connected by a fungal mycelial network that helps to distribute nutrients, minerals and water. When trees are isolated from others, they have difficulty maintaining a healthy existence. The practice of clear-cutting a forest, then replacing it with a monoculture of plantings, is not the best for the future forest or for the lumber industry trying to restore forest for harvesting. As humans, we have developed the internet and the World Wide Web. Long ago, fungi developed the Wood Wide Web.

I would like to suggest a book specifically about fungi, called *Entangled Life*, by Merlin Sheldrake. We may tend to think of fungi as less fascinating than other things we see when hiking, but this book offers a glimpse at the importance of fungi to everything else in nature. A very long time ago, all life was in the sea; there were no land plants or land animals. It was the relationships between fungi and algae that resulted in the first plants that could tolerate the dry environment of land. Animals were able to live on land only once plants were there — for food.

When we think of fungi, we think first of mushrooms, but those are just the reproductive structures that periodically pop up above the ground, spreading spores. Mycelia, thread-like structures that grow underground, are the true body of the fungus. A teaspoon of soil can contain as much as 5 miles of mycelia! Where we put food into our body and then digest it, a fungus grows through its food, digesting as it goes. The true body of a fungus, the mycelial network, can get very large. In fact at present it is the largest single organism in the world, but it cannot be seen by humans walking on the surface. This humongous fungus, a Honey Fungus, can be found in Oregon. It weighs hundreds of tons, covers almost 4 square miles, and is somewhere around two to eight thousand years old!

Mycorrhizal hyphae, the name given the mycelial association with plant roots, are 50 times finer than the finest plant roots and can exceed root length by as much as a hundred times. These linked fungi are so prolific that their mycelia make up between a third and a half of the total living mass of soil on our planet. Globally, the total length of mycorrhizal hyphae in the top 10 centimeters of soil is around half the width of our galaxy.

Biochemically speaking, fungi produce many more kinds of chemicals than animals do. We often use some of the chemicals that fungi produce, like antibiotics, mind-altering “magic mushrooms”, and cancer drugs like Taxol which can be extracted from the fungi that live in yew trees. Fungi have had a very long time to evolve chemicals that help them reproduce. The chemical producing the pleasing odor of a truffle lures animals to dig them up, spreading their spores.

Some fungi are even more mind-altering — take zombie ants, for instance. To get a sense of these ants, imagine a carpenter ant infected by a fungus. Once infected, the ant, which normally avoids being in the open, climbs up the highest grass blade and clamps its jaws around the top in a death grip. Mycelium grows from the ant's feet, stitching it to the grass blade. The fungus digests the ant's body and sprouts a stalk on its head, from which spores shower down on fellow ants below. These “zombie” ants thus help the fungus reproduce.

Mind-altering LSD is produced from a chemical made by fungi, but Suzanne Simard suggests another means whereby fungi have altered our behavior. The utility of yeast, a fungus, for making bread and wine has led humans to farm and domesticate these fungi for human use. Some suggest another interpretation: that yeast has domesticated us! We feed them well and encourage reproduction so we can have beer. *(continued on next page)*

Live in the sunshine. Swim in the sea.  
Drink in the wild air.

— *Ralph Waldo Emerson*

*(continued from previous page)*

Yes, as John Muir said, everything is connected to everything else in the world, more than we ever thought. He was not as aware, however, of the role fungi play in this interconnectedness. More and more, scientists are realizing that adaptation and evolution occur as organisms interact and reap mutual benefit (though perhaps that's not true in the case of those poor zombie ants). As we hike this summer, let's be sure to think about what lies beneath the forest floor, the network of fungal mycelia procuring minerals and water for all the trees in return for some of their photosynthetic products. This network allows trees to communicate with each other with messages we are just beginning to understand. Some say this network is like neurons in our brain. Wouldn't it be fascinating to tune into their conversations?

~Sonya Vickers



## Register for Stump Sprouts by Monday, August 8

### **Stump Sprouts Weekend, West Hawley**

Friday, September 9 to Sunday, September 11

Leaders: Sheila Paquette, Richard Paquette, Kevin Kopchynski

Registration: Reservations and 50% deposit should be sent in time for receipt by Monday, August 8. The trip may be canceled if fewer than 18 people have paid by that date. For further information, please contact Sheila (413-262-8994 or spaquette139@gmail.com). All-inclusive cost for two nights' lodging and six meals will be about \$175 per person, with final cost depending on number of registrants. Indicate your roommate preference, make your check payable to The Naturalists' Club, and mail to Sheila Paquette, 62 Brentwood Drive, Westfield MA 01085.

High on the side of a mountain with a magnificent view, Stump Sprouts ski lodge provides a beautiful setting for walking, hiking, or relaxing in solitude. A ninety-minute drive from Springfield, the property consists of a 450-acre tract surrounded by Dubuque, Savoy, and Mohawk State Forests. Guests need to bring their own bedding, towels, and toiletries; bathrooms are shared. Our hosts will provide superb family-style garden-fresh meals, complete with homemade breads and cookies. There is usually a choice of meat or vegetarian fare. Bring along binoculars and good footwear. Limit: 20 people.

### **Rice Nature Preserve, Wilbraham**

Wednesday July 13, starting at 9 a.m.

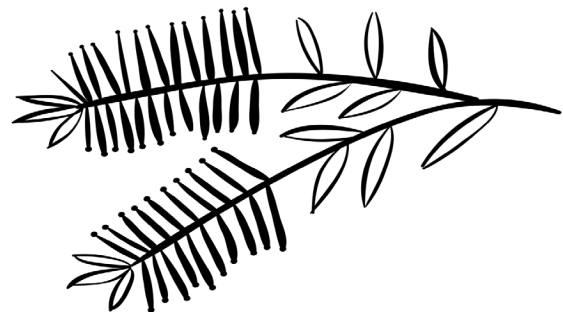
Leader: Sonya Vickers

Registration: Please contact Sonya (413-218-7742)

Meeting Place: Rice's Fruit Farm, 757 Main Street, Wilbraham

We will hike a 3-mile trail up to the top of Rattlesnake Peak and back. Our hike, through land cleared as an apple orchard, will offer terrific views of both the Holyoke Range and the Berkshires. The trailhead has limited parking, so let's meet at Rice's Fruit Farm. After the hike, we can get some baked goods or a sandwich. Bring water, and dress for the weather.

Summer is the annual permission to be lazy. To do nothing and have it count for something. To lie in the grass and count the stars. To sit on a branch and study the clouds. — *Regina Brett*



### **An Evening Paddle on an Active Beaver Pond, Otis**

Saturday, July 23, from 5 to 8 p.m.

Leader: Tom Condon

Registration: Please contact Tom (413-454-2331 or [science@condon.net](mailto:science@condon.net))

Meeting Place: Papa's Gulf Station, Route 23 (2000 E. Otis Rd.), East Otis

You are gliding quietly along in your canoe when all of the sudden you hear a crack, like a gunshot. You turn quickly to see radiating ripples disturbing the calm surface of the pond. You have almost seen a beaver, but he saw you first. His tail slap is a warning to other beavers on the pond that there are interlopers around. Fortunately, beavers are curious and, if you remain quiet, they will resurface to check you out. This is the experience we hope to have in Otis on Upper Spectacle Pond, a small but active beaver pond. Come join us to learn more about beaver behavior. Bring your own canoe or kayak, or rent a canoe from our local scout troop. Note the time — we are planning an evening paddle because this time of day offers the best shot at viewing these shy creatures. We will stop on a small island, so bring along a small evening meal and perhaps a folding chair.

We will meet at Papa's Healthy Food & Fuel (the Gulf Station) on Route 23 in East Otis. You can use the restroom or buy snacks here. The pond is down a mile-long dirt road. We have done it with our Prius, so you should be fine. Plan for the weather and bring along a camera or binoculars. Canoeing/kayaking is a good social-distancing activity, but don't forget your mask for when we load and unload our boats.

### **Early Morning Paddle on the Chicopee River, Ludlow**

Tuesday, August 9, from 8 to 11 a.m.

Leaders: Tom & Nancy Condon

Registration: Please contact Tom (413-454-2331 or [science@condon.net](mailto:science@condon.net))

Meeting Place: Parking lot by Red Bridge off Red Bridge Road, Ludlow

Let's beat the heat and get out early to enjoy a beautiful summer morning. Grab your boat and paddling gear and join us for an easy paddle on the Chicopee River, Red Bridge Reservoir. Nature surrounds the reservoir and at this time of day, it is just waking up. Bring along your binoculars and camera as we scan the riverbanks for birds, turtles, and mammals. We'll paddle upriver until we start to feel the current, then we'll turn and drift on back. Round trip is about 5 miles. Don't have a boat? We can provide a canoe and gear for a minimal fee. Bring along a snack, some water, and be sure to dress for the weather.

### **Facing Rock Wildlife Preserve, Ludlow**

Wednesday August 31, starting at 9 a.m.

Leader: Sonya Vickers

Registration: Please contact Sonya (413-218-7742)

Meeting Place: Big Y shopping center in Ludlow. From Route 21, turn right and park beyond the Berkshire Bank. From the Ludlow exit of the Mass Pike, turn left towards the Big Y parking lot.

Facing Rock Wildlife Preserve spans 1,000 acres of intertwined trails just west of the Ludlow reservoir. If you have a cell phone, try downloading the *AllTrails* app, where you can see the complexity of the Preserve. *AllTrails* is handy for any hike, and on this particular trail system, it is particularly so. The main sight here is Facing Rock itself, a cliff that looks off to the southwest with a view of Westover Air Field, and beyond that, the Springfield skyline. We will hike about 4 miles. The trail is rocky, and walking sticks may be useful. Bring water and a light lunch or snack.

### **Appalachian Trail Series: Benedict Pond & The Ledges, Monterey**

Sunday, September 11, from 9 a.m. to 3 p.m.

Leader: Tom Condon

Registration: Please contact Tom (413 454-2331; or [science@condon.net](mailto:science@condon.net))

Meeting Place: Blandford Post Office, Route 23, Blandford

Beartown State Forest in Monterey has two unique geologic features: Benedict Pond and the Ledges. We'll start our hike along the shores of the 35-acre Benedict Pond, a glacial remnant. Although most of the trail around the lake is relatively level, there will be places where a good pair of boots and a set of walking sticks will be beneficial. The pond is home to herons, chickadees, and beavers. When we reach the pond's south end, we'll intercept the Appalachian Trail and take a short, moderate climb to an area known as the Ledges which offers exceptional views of the western Berkshires. Our hike will take us back down the hill and continue around the pond, back to where we started. Total hiking distance is about 3 miles with elevation gain of about 400 feet. Bring along lunch, water, and dress for the weather.

### **Stanley Park Trees, Westfield**

Sunday, 18 September, from 1 to 3 p.m.

Leader: Dave Lovejoy

Taking the time to learn a half-dozen kinds of deciduous trees will make it possible for the hiker to identify most of the common ones seen in the woods (a few more are likely at the edge of a woodland). We should see all of these on our walk, including a few evergreen trees, and perhaps will focus on other plants, depending on the interests of the group.



## SEPTEMBER MEETING: What is the Kestrel Land Trust All About?

Wednesday, September 21, starting at 7 p.m.  
Tolman Auditorium, Springfield Science Museum  
Speaker: Kristin DeBoer, Executive Director of Kestrel Land Trust

Join us for an informative meeting about one of the most successful land trust organizations in the Connecticut River Valley. Through a slide presentation, Kristin DeBoer will describe Kestrel's five-year plan to accelerate the pace of land conservation in our region and the goal of protecting 5,000 acres during the next few years. She will offer an overview of the organization's history and current efforts, emphasizing forest conservation.

About the speaker: Kristin DeBoer has been working in the environmental field for 25 years. She has served as the Executive Director of Kestrel since 2006 and has overseen the organization's growth from a volunteer-led group to a professionally staffed regional land trust. Kristin has a B.A. in economics and environmental science from Bucknell University and an M.S. in Environmental Studies from Antioch University.

**From the President:** *Donation to the Kestrel Land Trust from the Dorothy Anne Wheat and Phyllis Wheat Smith Funds*

I am happy to announce a \$10,000 donation to the Kestrel Land Trust in celebration of their 50 years with a capital campaign, a goal of protecting 5,000 acres of forest and open land in the Connecticut River Valley. They have almost reached their \$5,000,000 goal, with donations from many organizations and private donors. What an exciting way to be a part of this goal! It is what the Naturalists' Club has been doing through the years: promoting knowledge, appreciation, and preservation of our natural environment. Thank you for your support. —*Dave Gallup*

### Hiking at Whately Center Woods, Whately

Saturday, September 24  
Leader: Carole Dupont  
Registration: Call or email Carole (413-896-0124; or [carole0136@gmail.com](mailto:carole0136@gmail.com)) for meeting place and time

A stimulating, easy 2-mile tramp beginning with a long well-constructed boardwalk through an interesting bog and wetlands, with characteristic plant life. Crossing a few footbridges, we'll reach the forest, where we will encounter beech and hemlock forests, with some exciting trees, including the tulip tree. A Native Names box is located between the two bridges. Long streaming brooks, a small waterfall and a stone wall, all make for a wonderful autumn walk as we enjoy nature preparing for its winter slumber. Bring your binoculars, water, snacks, good hiking boots, hiking poles and dress according to the weather conditions.

Happily we bask in this warm September sun, which illuminates all creatures.  
— *Henry David Thoreau*



## Available now: *Flora of Forest Park* by Dave Lovejoy

This publication, sponsored by the Naturalists' Club, provides a history of the Park dating back to the first Park Commission in 1883. It also examines changes in the Park's flora since the time of Luman Andrews' *Flora of Springfield* a century ago. Readers with some familiarity with the scientific names of plants will find this book easier to use, but common names are also included, and there is a separate index to common names. The bulk of the book is the species accounts of all the higher plants (no algae and mosses) known from the Park. For each species, its presence in the early 1900s is compared to its current status. The additional 30 pages of text describe the Park vegetation and its changes, native and invasive species, how the study was conducted, and (the largest section) history of the Park.

The cost is \$15; plus \$3 if a copy is mailed to you. All proceeds go to the Club treasury. Please send a check (made out to The Naturalists' Club) to Dave at Department of Biology, Westfield State University, POB 1630, Westfield MA 01086 if you would like a copy mailed to you, or get one at a monthly meeting in the fall.

# Meeting recaps from Spring 2022

## **March Meeting Report: Learning to love your migratory fish**

*Speaker: Dr. Andrew Fisk*

Dr. Fisk (Norwegian for “fish”) is Executive Director of the Connecticut River Conservancy, the second oldest watershed organization in the U. S. The focus of his presentation was diadromous fish, species migrating between salt and fresh water, which make up only about 1% of the world’s fish species. The two dozen Club members and guests in attendance will likely recall the answer to Andrew’s one riddle/bad joke: “What did the fish say when it ran into a wall?” Participants were also asked what was their favorite Connecticut River fish; Andrew never revealed his favorite directly, but it appeared (to me) to be the lamprey. Species discussed included the Atlantic salmon, two species of sturgeon, shad, the American eel, and the lamprey. Not surprisingly, some have been greatly impacted in their travels upriver and into tributaries by dams, perched culverts, and warmer water, but species such as the eel manage to make their way as far as Pittsburg, New Hampshire and others, even the federally endangered shortnose sturgeon, are showing a modest increase in numbers.

## **April Meeting Report: Invasive Insects Impacting Massachusetts**

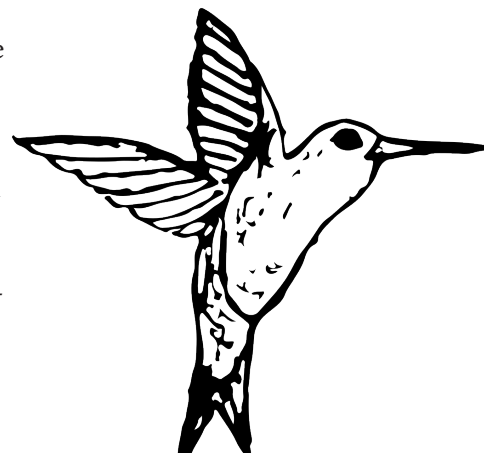
*Speaker: Eric Reynolds*

Twenty-two members and guests benefitted from Eric Reynolds’ perspective based on four decades of experience with the effect of insect pests on forest health. He discussed nine species of pests, some well established in the state and some not yet here but known close by in New York. An example of the latter is the Southern pine beetle, feeding primarily on pitch pine and capable of causing considerable mortality on other pine species as well. Most species discussed, including the emerald ash borer, hemlock woolly adelgid, elongate hemlock scale, red pine scale, and spotted lanternfly, present major problems. However, others such as the winter moth and Asian longhorned beetle now seem to be effectively controlled although vigilance is necessary to prevent further outbreaks. Also briefly discussed was the potential impact of climate change, which will surely affect insect pests as it is already influencing just about every other environmental issue.

## **May Meeting Report: Native Plants – Why They Matter**

*Speaker: Leslie Duthie*

Leslie Duthie, who retired in 2019 after decades as horticulturalist at Norcross Wildlife Sanctuary, ended the year’s meetings with a report on the advantages of gardening with native plants. An important short answer to the question, Why use natives? is that native plants attract native wildlife. Among the natives mentioned and the animals dependent on them were columbine (hummingbirds), violets (fritillary butterfly), asters and goldenrods (migrating songbirds), dogwoods and viburnums. Humans have developed cultivars (short for cultivated varieties, which in the case of native plants Leslie called nativars), which we may find desirable for their color or a form considered superior to the wild variety, but Leslie explained that the pollinators may not agree. As an example, an Echinacea variety with petal-like flowers throughout the flower heads, lacks the disk flowers which attract bees and other pollinators, thus denying them their nectar meal.



*~reports by Dave Lovejoy*

Summertime is always the best of what might be.  
— Charles Bowden

## ONLINE EVENTS THROUGH LAUGHING BROOK WILDLIFE SANCTUARY

These programs at Laughing Brook require registration with Mass Audubon (800-710-4550). Most have a registration fee. To sign up, please, visit [www.massaudubon.org](http://www.massaudubon.org).

### Introduction to Summer Wading Birds

Tuesday, July 19, from 7 to 8:30 p.m

Leaders: Kathy Seymour and Jane Sender

Wade into the world of herons, egrets, ibis and bitterns. These long-legged, colorful, graceful birds found in coastal and inland wetlands are especially adapted to hunt on the water's edge. You'll discover their fascinating natural history, including foraging strategies, elaborate courtship displays, and breeding rookeries, as well as what Mass Audubon's research at coastal breeding colonies can tell us. Learn wading bird identification tips and the best places to view them in Massachusetts and beyond.

### Identifying Hawks in Flight (online)

Thursday, September 8, from 7 to 8:30 p.m.

Leader: Paul M. Roberts

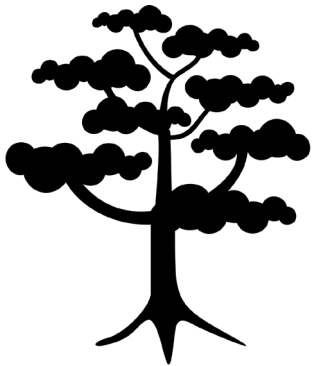
Every autumn millions of hawks migrate south, providing the best opportunities to see them in flight. Identifying soaring hawks at a distance is very different from seeing them close-up in photos. This online presentation will introduce you to the eleven most commonly seen hawks in New England and a few tricks for you to identify them at a distance on your own. By the end of the presentation, you'll know where and when to look for them, and how to identify what you find.



## Book review

*Finding the Mother Tree: Discovering the Wisdom of the Forest*, by Suzanne Simard

*Working to solve the mysteries of what made the forest tick, and how they are linked to the earth and fire and water, made me a scientist. I watched the forest, and I listened. I followed where my curiosity led me, I listened to the stories of my family and people, and I learned from the scholars. Step-by-step – puzzle-by-puzzle – I poured everything I had into becoming a sleuth of what it takes to heal the natural world.*



Suzanne Simard and her coworkers, colleagues, scientists, family members, friends, and students have conducted hundreds of experiments to assess theories of forest ecology. Through these investigations, Suzanne, Professor of Forest Ecology at the University of British Columbia, discovered how trees communicate and form relations to create a forest society. She has planted thousands of seedlings under varying conditions. Her book describes, in a very special way, the struggles and difficulties she and her team encountered in attempting to validate their work and communicate with a resistant forestry community. Her own family story is very poignantly interwoven into her academic and scientific pursuits.

Suzanne describes the various types of fungal mycorrhizae that form symbiotic connections with the root hairs of all trees and forest plants. The fungal mycelium constitutes thousands of miles of the interconnected underground system, the microscopic hyphae, the wiring that conveys messages and communications throughout the forest and the channels for transferring nutrients like carbon, nitrogen, sugar and water. Mother Trees are the majestic hubs, the sources of forest communication, protection and sentience. And as Mother Trees die, they pass their wisdom down to their offspring.

This book offers a wonderful history of the evolution of philosophies in forestry. One of the earliest of these is the notion that trees are competitive with one another and that weaker, less economically important, species should be removed, informing the practice of clearcutting. Complexity science, which acknowledges the multifarious interactions that make up the forest, is transforming forestry practices into what is adaptive and holistic.

You can learn more about the Mother Tree Project at <http://mothertreeproject.org> and you can become part of a citizen-science initiative, a movement to save the forests of the world. This is a very well written, informative and enjoyable read for every naturalist and just anyone who loves trees or is looking for a great book!!

—Review by Carole Dupont

**FROM THE TREASURER**

September is the month for membership renewal. Those receiving the electronic newsletter will find membership status listed in an upcoming email. For those receiving the paper newsletter, '22-23 (or later) on the mailing label indicates that membership is paid for the coming year; '21-22 indicates that renewal is due. To establish or renew membership, please send information/ payment to:

Tom Condon,  
80 General Knox Road,  
Russell, MA 01071

If your address and contact information have not changed, the form below need not be completed, but please do email us to add your electronic address to our list and to indicate whether you'd like to switch from print to electronic newsletter, which helps us save paper and postage.

**MEMBERSHIP LEVELS**

- \$20 per year for Individual or Family Membership
- \$30 per year for Supporting Membership
- \$50 per year for Sustaining Membership
- \$300 for Lifetime Membership

**A Reminder**

**To receive electronic updates, please send us your email address**

If you'd like to receive electronic notice of late-breaking trip announcements, or to switch from a paper to electronic Newsletter subscription, please be sure to share your email address with Tom Condon (*science@condon.net*).

**Renew your membership**

Name \_\_\_\_\_

Address \_\_\_\_\_

Phone Number \_\_\_\_\_ Email \_\_\_\_\_

Requests for programs/trips \_\_\_\_\_

Would you like to receive the electronic newsletter instead of a paper copy? \_\_\_\_\_

*Please send information per the above to: Club Treasurer, Tom Condon, 80 General Knox Road, Russell, MA 01071*



The NATURALISTS' CLUB was founded in 1969 for the purpose of actively promoting knowledge, appreciation, and preservation of our natural environment.

It is an all-volunteer non-profit organization.

Education is a main focus of The NATURALISTS' CLUB.

Programming, with an emphasis on local natural history, is designed to create camaraderie among people of diverse interests through experiences deepening their appreciation of nature.

Activities are geared to acquaint the layperson with the natural world, mostly through field trips. Monthly meetings are held at the Science Museum at the Quadrangle in Springfield, Mass.

Most field trips and programs are free.

**OFFICERS & DIRECTORS**

**PRESIDENT**  
David Gallup  
(413-525-4697)  
*davesuzy5@hotmail.com*

**VICE PRESIDENT**  
Nancy Condon  
(413-297-0778)  
*nancy@paddleforwater.net*

**TREASURER**  
Tom Condon  
(413-454-2331)  
*science@condon.net*

**CORRESPONDING SECRETARY**  
Suzanne Gallup  
(413-525-4697)  
*davesuzy5@hotmail.com*

**RECORDING SECRETARY**  
Dave Lovejoy  
(413-572-5307)  
*dlovejoy@westfield.ma.edu*

**DIRECTORS**  
Sonya Vickers  
(413-218-7742)  
*sonya.vickers@yahoo.com*

Carole Dupont  
(413-896-0124)  
*carole0136@gmail.com*

Jack Megas  
(413-782-3962)

Dietrich Schlobohm  
(413-788-4125)

**VOLUNTEERS**

**WEBMASTER**  
Tom Condon  
(413-564-0895)  
*science@condon.net*

**NEWSLETTER EDITOR**  
Diane Genereux  
(413-388-2830)  
*natclubnewsletter@gmail.com*

**LAYOUT & GRAPHICS**  
Loren Hoffman  
(413-569-5689)  
*lkhgrdes@gmail.com*

**PROOFREADERS**  
Nancy Condon  
Dave Gallup  
Suzy Gallup  
Dave Lovejoy  
Debbie Leonard Lovejoy