



The

## NATURALISTS CLUB

NEWSLETTER

Springfield Science Museum at the Quadrangle, Springfield, Massachusetts

## July to September Calendar of Events

Whenever the sun  
is shining, I feel  
obligated to play  
outside!

~ Charles M. Schultz

## JULY

- |    |          |  |
|----|----------|--|
| 8  | Sunday   | Walk at Forest Park, <i>Springfield</i>    |
| 13 | Friday   | Conjunction Stargazing, <i>Northfield</i>  |
| 28 | Saturday | Hike to Chesterfield Gorge, <i>Chester</i> |

## AUGUST

- |    |          |   |
|----|----------|---|
| 11 | Saturday | Let's Go for a Bike Ride!, <i>Easthampton</i> |
| 13 | Monday   | Registration Due for Stump Sprouts Weekend    |
| 18 | Saturday | Paddling Swift River, <i>Belchertown</i>      |
| 25 | Saturday | Healthful Hike, <i>Westfield</i>              |

## SEPTEMBER

- |     |               |  |
|-----|---------------|--|
| 1   | Saturday      | Paddling Wood Creek Pond, <i>Winsted, Connecticut</i>      |
| 7-9 | Friday-Sunday | Stump Sprouts Weekend, <i>West Hawley</i>                  |
| 16  | Sunday        | Harvard Forest and Fisher Museum, <i>Petersham</i>         |
| 19  | Wednesday     | SEPTEMBER MEETING: Our Changing New England Forests        |
| 22  | Saturday      | A Hike and Visit at the Hitchcock Center, <i>Amherst</i>   |
| 29  | Saturday      | Hike the Appalachian Trail to Upper Goose Pond, <i>Lee</i> |



# NATURALIST'S CORNER

## WHAT MAKES EARTH SPECIAL?

As we celebrate Henry David Thoreau's 200th birthday, we should take to heart a thought-provoking comment of his:

*Heaven is under our feet as well as over our heads.*

Our Blue Planet is indeed a special place. What, exactly, has created its unique features? About 12 billion years ago, the first stars were formed in clouds of hydrogen and helium. At the time, these were the only two elements in the universe. These clouds and stars formed larger structures called galaxies. These stars, thousands of times more massive than our Sun, were short-lived. As these giant stars died, they created the other 90 natural elements, like oxygen, iron, silicon, and magnesium, that make up our Earth. They also gave rise to carbon, nitrogen, sulfur, and phosphorus. These elements, along with oxygen and hydrogen, make up all living organisms, including ourselves.

A star especially important to us – our own Sun – was born much later (5 billion years ago), in a similar cloud whose center heated up and started nuclear fires. In our galaxy, the Milky Way, most star systems are double or multiple and many are highly variable in their radiation. Our Sun travels with a family of planets that formed in its cloud. Our sun has been relatively stable for a long while ~ 4.5 billion years. As such, it contrasts sharply with other large stars, which typically live only ~1 billion years. Smaller stars tend to live longer but would be too cool to support life as we know it. They also emit much more dangerous radiation.

The planets that travel with our sun formed from bits of dust that gradually grew larger and larger, eventually forming planetesimals. Their growth occurred during a time of great violence. Some emerging planets were destroyed or gravitationally thrown out of our solar system.

About 4.4 billion years ago Earth was hit in a glancing blow by a smaller object, Theia, which knocked us off our upright stance onto our 23-and-a-half degree axis. It was that collision that gave us our four seasons! As Theia was destroyed, its iron core merged with Earth's. This created the large object at our center that creates the magnetic field that protects us from deadly solar and cosmic radiation and affords us our atmosphere, our oceans, and even the beautiful aurora borealis.

Temporarily, Earth was surrounded by a ring of rocks. These eventually became our Moon, which, today, is the largest satellite in relation to the size of its planet. It also controls our tides, with help from the Sun, and keeps our axis stable, sustaining our climate. The Moon has also slowed Earth's rotation from 6 to 24 hours preventing extreme weather contrasts day and night.

As our young, hot Earth cooled down, its layers differentiated into a crust on which our granite continents now ride over a hotter mantle, where volcanic activity arises. Below this is a liquid iron ocean that generated the Earth's magnetic field. Then at the center, under great pressure and heat at temperatures similar to those at the Sun's surface, is that solid core, turning separately from the rotation of the planet! Tectonic plates create and move our continents along with volcanoes that help regulate our atmospheric temperature.

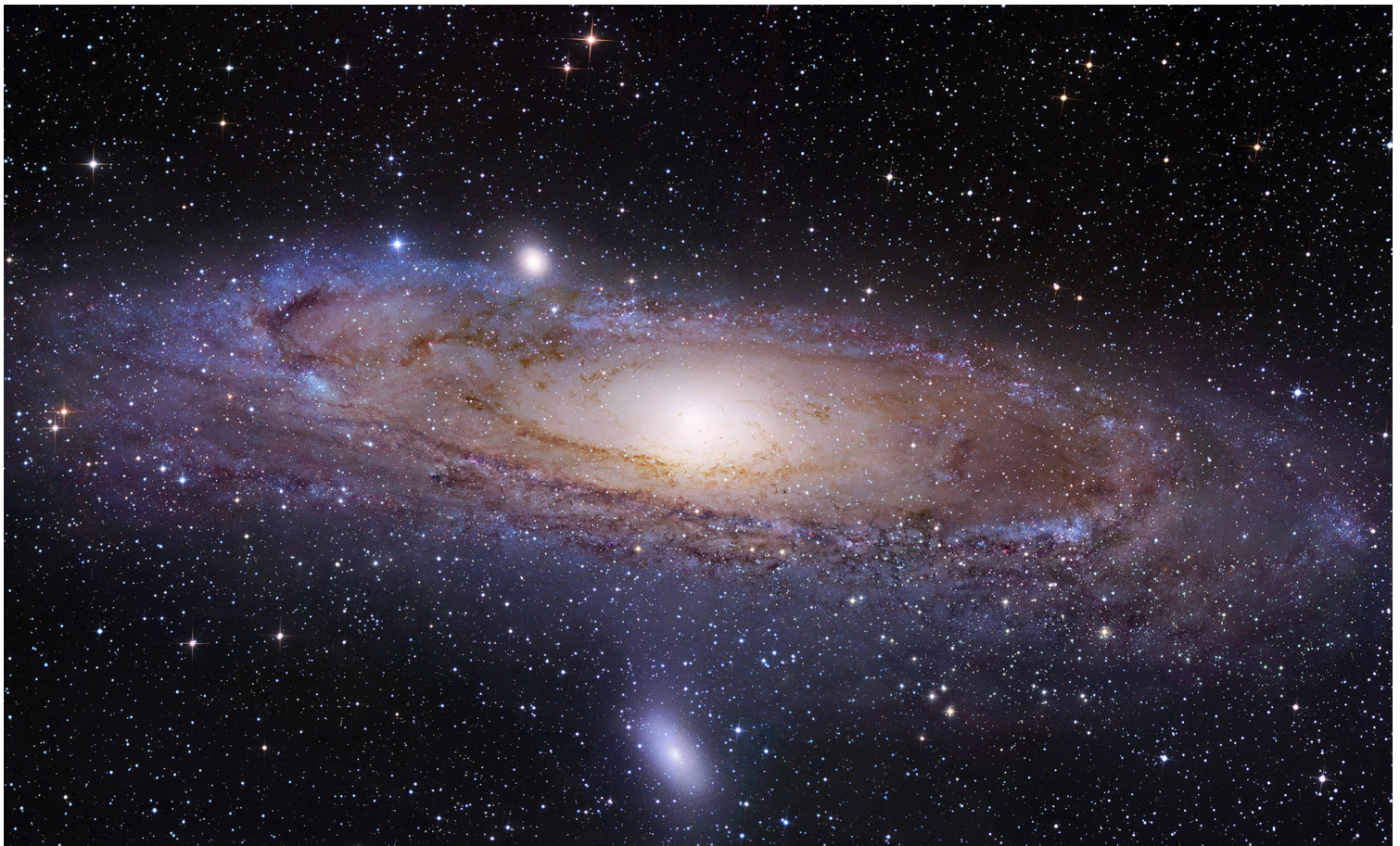
About 4 billion years ago, Earth was bombarded by comets and asteroids that brought more water and some of the organic substances that are now in our bodies. A little more than 3.4 billion years ago, hydrothermal vents at the bottom of the oceans poured out heat, gas, and minerals. It is here that many scientists think that the first life forms came into existence. Bacteria became active there and in time adapted to survive in every habitat, using hydrogen for energy.

Roughly 2.4 billion years ago, cyanobacteria evolved photosynthesis, making food from sunlight, and emitting poisonous oxygen that killed many other bacteria. It is this same element, oxygen, that today keeps us alive. Deadly ultraviolet rays reacted with oxygen, creating the ozone layer that today protects us from the Sun. The abundance of oxygen caused the climate to dramatically cool causing one of many “Snowball Earth” events that almost froze life to extinction. Volcanoes and greenhouse gases stopped this. Near extinctions trigger and shape the evolution of survivors.

Eventually, some bacteria merged with others to form closed cells with structures that today are chloroplasts in plants and mitochondria in both plants and animals. These organelles today power our lives. About 600 million years ago, oxygen and water allowed more complex life to develop and spread to shore, solid land, and air. Today more than 8 million species populate our planet. However, 99.9% of all species that have ever lived are extinct! An old Greek, Heraclitus said long ago, “There is nothing permanent except change.”

The Sun is getting hotter and bigger, and many scientists think that our air and water will last only a billion years longer. Can we continue to evolve and change? Hey, whatever! Enjoy every wonderful day and take care of each other as we journey through space and time.

~ Jack Megias



*This undated image provided by the University of Utah shows the Andromeda galaxy, made by the Hubble Space Telescope. Astronomers are looking for thousands of volunteers to scan computerized images of a neighboring galaxy in a survey that could explain how stars are continually being formed across the universe. The survey is exploring the Milky Way's nearest big neighbor, the Andromeda galaxy, about 2.5 million light-years away. (AP Photo/University of Utah)*



### **Walk at Forest Park, Westfield**

Sunday, July 8, starting at 1 p.m.

Leader: Dave Lovejoy (413-572-5307; [dlovejoy@westfield.ma.edu](mailto:dlovejoy@westfield.ma.edu))

Meeting Place: Please call Dave.

Forest Park, Springfield's largest park by far, has a variety of habitats and rather easy walking trails. These will enable us to visit several different plant communities and to see a variety of native and introduced species in the summer flora. If you call to register, please be sure to leave your phone number; the number listed is an office phone, which will not always be answered (but you can leave a message anytime).

### **Conjunction Stargazing, Northfield**

Friday, July 13, starting at sunset, 8:20 p.m., with observations starting by 9:30 p.m.

Meeting Place: Northfield Mountain Environmental Center

Registration: Please call Jack Megas (413-782-3962) ahead of time.

The Conjunction was founded by Naturalists' Club members 36 years ago and is the oldest astronomy convention in the state. In addition to stargazing, it offers talks, meals, and camping. Join us for this free evening of stargazing, with the possibility of seeing four planets. Heavy clouds or rain cancels.

### **Hike to Chesterfield Gorge, Chester**

Saturday, July 28, from 9 a.m. to mid-afternoon

Leader: Sonya Vickers (413-566-3406)

Registration: Please call to let Sonya know that you are coming and for information on meeting place.

Chesterfield Gorge is a Trustees of Reservations property. Here, the Westfield River cuts a sheer chasm through granite. A trail alongside the river offers views down into the gorge, and, eventually, of an adjacent country road. Bring a lunch – we'll eat outside and enjoy the scenery.

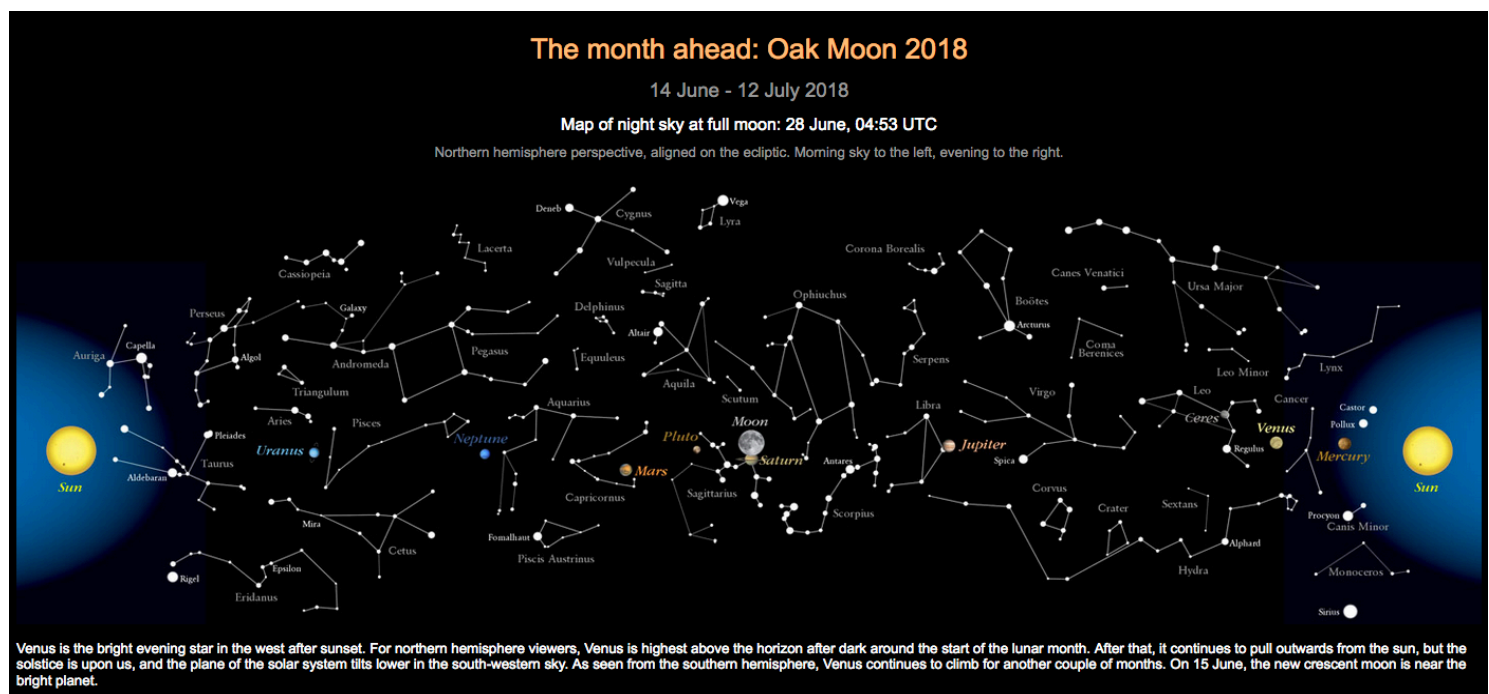
### **Let's Go for a Bike Ride on the Manhan Rail Trail, Easthampton**

Saturday, August 11

Leader: Carole Dupont (413-896-0124; [carole0136@gmail.com](mailto:carole0136@gmail.com))

Registration: Please call or email Carole for meeting place and time.

We will bike 12 to 15 miles along a flat, pleasant bike trail, stopping to observe wildflowers, and for rest and water breaks. The bagel shop along the trail offers a good spot for a light snack or lunch. Bring your trailworthy bike. A helmet is a must. You'll also wish to bring water, snacks. Please be sure to dress according to the weather conditions. Rain will cancel.



## Register by Monday, August 13 for ...

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

Friday, September 7 through Sunday, September 9, from dinner on Friday evening through Sunday luncheon.

Leaders: Dietrich and Julie Schlobohm

Registration: Reservations and 50% deposit should be sent in time for receipt by Monday, August 13. The trip may be cancelled if fewer than 18 people have paid by that date. For current information, please call Dietrich or Julie (413-788-4125). All-inclusive cost for two nights' lodging and six meals is \$172 per person. Indicate your roommate preference, make your check payable to The Naturalists' Club, and send to Dietrich Schlobohm, 52 Poplar Ave., West Springfield, MA 01089.



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, good footwear, curiosity, and a sense of adventure. Limit: 20 people.

### **Paddling the Swift River**, *Belchertown*

Saturday, August 18, from 9 a.m. to 2 p.m.

Leaders: Tom & Nancy Condon

Registration: Please contact Nancy (413-297-0778; [spiderwoman@russellma.net](mailto:spiderwoman@russellma.net))

Meeting Place: Big Y parking lot on Route 32, north of Palmer exit on Mass Pike.

This beautiful river flows from the Windsor Dam at the Quabbin Reservoir. The water is cold and clear as it meanders its way from the Reservoir to Ware and on to the Connecticut. We'll start our paddle by going upstream against a gentle current. The crystal clear waters offer plenty of opportunity to spot brook trout lazing in the many pools. The encroaching river banks also offer sightings of birds, so bring along your binocs. After traveling upriver for a while, we'll turn our boats and drift downriver past our put-in and to where the meanders of the river open into wide channels. Here the chances of seeing osprey and herons increase. We'll explore the backwaters before eventually turning again and paddling back to our cars at Cold Spring Road. Bring along a lunch, camera and binoculars. Dress for the weather. No boat? No worries. Call Tom.

### **Healthful Hike**, *Westfield*

Saturday, August 25, from 9 a. m. to 10:30 a.m.

Leader: Nancy Condon

Registration: Please contact Nancy (413-297-0778; [spiderwoman@russellma.net](mailto:spiderwoman@russellma.net))

Meeting Place: Westfield State University's South Lot, at the far back corner.

We intuitively recognize how good it feels to get out into nature. Fresh air, soothing aromas, gentle streams, and beautiful forests have a profound effect on us. Studies have shown that our brains do in fact respond quite readily to nature's healing effects. This hike will highlight ways we can improve our mental and emotional well-being by experiencing nature in a mindful manner. If you are tense or anxious or feel like you need a mental boost, come join this therapeutic, healthful hike and get rejuvenated. Our hike will be no more than one mile long. Bring water, dress for the weather, and be ready to engage your senses in a beautiful setting.

This morning, the sun endures past dawn.  
I realize that it is August: the summer's last stand.

~ Sara Baume

**Paddling Wood Creek Pond, Winsted, Connecticut**

Saturday, September 1, from 9 a.m. to 3 p.m.

Leaders: Tom & Nancy Condon

Registration: Please contact Nancy (413-297-0778; [spiderwoman@russellma.net](mailto:spiderwoman@russellma.net))

Meeting Place: Dunkin' Donuts on College Highway in Southwick

Tucked into the hills of northwest Connecticut is a hidden gem called Wood Creek Pond. This small tranquil lake is surrounded by undeveloped forests. With just a few strokes of your paddle, the tiny state-owned boat ramp is far away, and so are the sounds and stresses of the modern world. The lake is dotted with small islands which we will explore for wildlife and blueberries. But the real treat is at the north end of the pond. Here exists a small bog, with pitcher plants and other remarkable finds. We'll explore from our boats this unique ecosystem and scan the skies for herons and eagles. On our drive home, we'll head back to Massachusetts by way of Campbell Falls State Park for a quick walk down to the falls. This small, but dramatic falls is hidden deep in a pine forest and tumbles down through a split in a rocky cliff. Before

reaching home, we will stop for dessert and something to drink at the Southfield General Store. They have an excellent bakery! Bring along a lunch, camera and binoculars. Dress for the weather. No boat? No worries. Call Tom & Nancy to rent a boat from a Southwick scout group at just \$10 per seat. So grab a partner (or we can find you one) and join us for this late summer paddle.

**Harvard Forest/Fisher Museum, Petersham**

Sunday, September 16

Leaders: Dave and Suzy Gallup (413-525-4697)

Registration: Please call Dave to let us know if you are coming, and for information on time and meeting place.

Join us for a field trip to the Fisher Museum's main exhibit displaying 23 internationally acclaimed dioramas portraying the history, conservation, and management of central New England forests. There is also a new Hemlock Hospice art installation by David Buckley Borden on view at the museum and on the hiking trails. Time permitting, we will hike the French Road Trail, a 2.5-mile self-guided ecology and history trail. Bad weather cancels.



**Our Changing New England Forests**

Wednesday, September 19, starting at 7 p.m.

Tolman Auditorium, Springfield Science Museum Speaker: Tim Parshall

Dr. Tim Parshall grew up in West Virginia, where he frequently investigated the forests just beyond his backyard. Today, he continues these investigations with students through his teaching at Westfield State University, where he is currently chair of the Environmental Science Department. Dr. Parshall studies how forest ecosystems change over time. He will present some results of ongoing research with students, addressing a wide range of questions: How long does it take for Oriental bittersweet to change a forest into a thicket? Are non-native shrubs leading to more ticks and Lyme disease? What changes can we expect to see as climate change continues?

**A Hike and Visit at the Hitchcock Center, Amherst**

Saturday, September 22

Leader: Carole Dupont

Registration: Please contact Carole (413-896-0124; [carole0136@gmail.com](mailto:carole0136@gmail.com)) for directions and meeting place and time. Registration is necessary so we know how many will tour the facility. There will be a \$5.00 fee for the tour.

This will be a moderate three-mile hike on the beautifully scenic trails of the Hitchcock Center.

Following the hike and lunch, we will have a guided tour of the Hitchcock Center, where we will learn how it has met rigorous environmental standards. The Center aims to restore a healthy interrelationship with nature, creating an environment that optimizes health and happiness, while operating within the water balance of its location and relying on renewable forms of energy. A fun and educational experience for all. Bring plenty of water, snacks, lunch, poles and attire suitable for the weather. Inclement weather will cancel both hike and tour.



## Hike the Appalachian Trail to Beautiful Upper Goose Pond, Lee

Saturday, September 29, from 10 a.m. to 3 p.m.

Leader: Tom & Nancy Condon

Registration: Please contact Nancy (413-297-0778; [spiderwoman@russellma.net](mailto:spiderwoman@russellma.net))

Meeting Place: Meet at the Appalachian Trail parking area on Rt 20 in Lee. From the junction of Rt 20/102 in Lee, (at the Mass turnpike exit 2/entrance to the Prime Outlet store). Head east on Rt 20 towards Becket, and drive 4.1 miles. The Appalachian Trail Parking area is on the right side of the road.

## Events at Laughing Brook

Events are sponsored by the Massachusetts Audubon Society. To register, visit [www.massaudubon.org](http://www.massaudubon.org) or call 413-584-3009. Registration fees are listed below.

### Insects of the Field and Forest

Saturday, July 21, from 10 a.m. to 11:30 a.m.

Leader: Kevin Kopchynski

Location: Laughing Brook Sanctuary, Hampden  
Come visit Laughing Brook to explore both field and forest to see and hear some of the many insects that live here. Watch as a bee pollinates a flower, see how many different types of butterflies you can count, and learn what lives within all that white spittle on the field plants. MassAudubon members, \$5 each for adults and children; \$7 for non-members.

### Introduction to Digital Photography

Sunday, September 23 and 30, from 1 p.m. to 4 p.m.

Leader: Kevin Kopchynski

Location: Hampden Town Hall

Learn the basics of nature photography just in time to photograph the beauty of fall in the Connecticut River Valley! We will discuss best practices for capturing an image, understanding exposure and focus, and using both manual and automatic exposure settings. Both digital and film users can benefit from this instruction, though when discussing equipment we will concentrate on digital photography and the special opportunities and challenges it offers. Adults only. MassAubudon members, \$25; \$30 for non-members.

Join us for this lovely hike on the Appalachian Trail to beautiful Upper Goose Pond, where we will wander its shoreline to look for wildlife. Our journey will start by skirting the edge of Greenwater Pond, crossing over the Mass. Turnpike on the footbridge and then ascending a small ridge. We will pass through pleasant forests until the view opens up at Upper Goose Pond. We'll stop to for lunch along the shoreline. Wear boots/sturdy shoes & bring drink/lunch. Moderately difficult hike. 5 hours – 4 miles

## Book Review

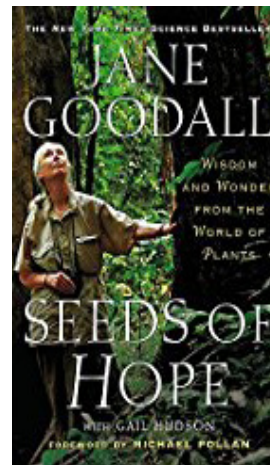


### Seeds of Hope: Wisdom and Wonder from the World of Plants, by Jane Goodall

We all recognize Dame Goodall for her famous anthropological work with chimps. But most may not readily associate her with plants. *Seeds of Hope* is an easy read, with important and timely conversations on the critical role of trees and plants in our world — and therefore in the future of life itself. GMOs, industrialization and the shrinking of our rainforest are just a few of the significant topics discussed in her book. Before reading this, for example, I never realized that billions of seeds are being saved and protected in botanical conservatories such as The Millennium Seed Bank and other seed banks around the world to prevent their extinction and preserve them for posterity.

An enlightening and very informative summer read while you're sitting on the beach!

~ Reviewed by Carole Dupont



## A Call for Ideas!

The Naturalists' Club is powered by the knowledge, ideas, and enthusiasm of its members. Do you have something you'd like to share with other members? Perhaps it's an idea for a field trip or book discussion. Or perhaps a piece you'd like to contribute for publication in our Naturalist's Corner feature. Please send your thoughts to Newsletter Editor Diane Genereux ([natcornernewsletter@gmail.com](mailto:natcornernewsletter@gmail.com); 413-388-2830). We look forward to hearing from you!

# THE NATURALISTS' CLUB

## MEMBERSHIP

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, '18-19 (or later) on the mailing label indicates that membership is paid for the coming year; '17-18 indicates that renewal is due. To establish or renew membership, please send information/payment to:

Dave Lovejoy  
The Naturalists' Club  
Department of Biology  
Westfield State University  
Westfield, MA 01086

If your address and contact information have not changed, the form below neednot be completed. But please do email us to add your electronic address to our records. And please let us know if you'd like to switch from the print newsletter to electronic newsletter, which helps us save paper and postage.

~ Thank you!

## MEMBERSHIP LEVELS

\$15 per year for Individual  
or Family Membership  
\$25 per year for Supporting Membership  
\$50 per year for Sustaining Membership  
\$300 for Lifetime Membership

In summer the empire of insects spreads.  
~ Adam Zagajewski

## Renew your membership

Name \_\_\_\_\_

Address \_\_\_\_\_

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

Email \_\_\_\_\_

Do you opt for electronic delivery of the Naturalists' Club Newsletter? Yes \_\_\_\_\_ No \_\_\_\_\_

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

Please send information per the above to: Club Treasurer, Dave Lovejoy, Department of Biology,  
Westfield State University, Westfield, MA 01086



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.

2018 JULY to SEPTEMBER

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The end-of-summer winds make  
people restless. ~ Sebastian Faulks