



The **NATURALISTS' CLUB**
 N E W S L E T T E R

Springfield Science Museum at the Quadrangle, Springfield, Massachusetts

October to December
Calendar of Events

OCTOBER

- | | | |
|----|-----------|---|
| 1 | Saturday | A Hike on the Mt Frissell Trail, <i>Mount Washington</i> |
| 2 | Sunday | Hiking the Holyoke Range, <i>Amherst</i> |
| 19 | Wednesday | OCTOBER MEETING: The Natural History of Alaska |
| 20 | Thursday | A Stroll at Ashley Reservoir, <i>Holyoke</i> |
| 29 | Saturday | Hiking at the Marsh-Billings-Rockefeller National Historical Park, <i>Woodstock, VT</i> |

NOVEMBER

- | | | |
|----|-----------|---|
| 16 | Wednesday | NOVEMBER MEETING: The Delmarva, Land Between the Waters |
| 17 | Thursday | An Autumn Walk at Fanny Stebbins, <i>Longmeadow</i> |
| 19 | Saturday | Hike to Goat Peak and The Eyrie on Mt. Tom, <i>Holyoke</i> |
| 27 | Sunday | A Peaked Mountain Hike ~ Hike Away your Thanksgiving Holiday, <i>Monson</i> |

DECEMBER

- | | | |
|----|-----------|---|
| 3 | Saturday | Quabbin Hike, <i>Belchertown</i> |
| 10 | Saturday | Walk at MacLeish Field Station, <i>West Whatley</i> |
| 10 | Saturday | An Evening with Naturalists, <i>Hampden</i> |
| 17 | Saturday | The Keystone Arches and the Opening of the West, <i>Chester</i> |
| 21 | Wednesday | DECEMBER MEETING: Winter Solstice Party |

When everything looks like a magical oil painting,
 you know you are in Autumn. ~ Mehmet Murat ildan

NATURALIST'S CORNER

Get Dirty, Get Healthy

Our gut biome is recognized as playing a major role in how healthy we are and even in how well our brains function as we age. As a result, probiotics and prebiotics are important supplements in our daily diet to help diversify the types of microorganisms living in our gut.

We are now starting to connect our health with the “soil biome”, meaning all the microorganisms living in the dirt -- bacteria, fungi, protozoa, and nematodes (microscopic roundworms) and even what’s referred to as the soil virome, the set of viruses living in the soil. Reintroduction into our guts of a fuller complement of microbiota from mud and water can help prevent the type of overreactions of an otherwise normal immune response that result in chronic diseases, including leaky gut syndrome and autoimmune disorders.

Our brain and our gut are connected to one another, via cranial nerve #10, the vagus nerve, an association we have all experienced emotionally: We can relate to the feeling of “butterflies in our stomach” when apprehensive or nervous, and sometimes we describe a jarring emotional experience as a “kick in the gut”. Moreover, a healthy gut actually helps maintain a healthy brain. A thriving gut enhances our brain’s memory and learning capacity and hopefully reduces risk of Alzheimer disease.

Little did I know fifteen to twenty years ago as I watched my young grandkids, Zach, Drew, Noah, Kessler, and Chloe, building roads in the dirt and making mud cities that they were establishing a diverse population microbiome as they “ate” the dirt. When a juicy apple slice slipped out of their plump, muddy little fingers into the dirt, they would pick it up and eat it before I could intervene. The children were building up their natural defense systems by introducing new microorganisms to their own gut biomes, microorganisms that would be beneficial as the diversity of their gut populations increased.

Some refer to soil-based organisms as the “king of probiotics”. In 2015, an international team of scientists at Northeastern University published a study on a new antibiotic, teixobactin, that destroys pathogens without any sign that it promotes resistance while doing so. The excitement of the finding is that they discovered this bacterium, *Eleftheria terrae*, while combing through a gram of plain old dirt!

Of all organisms, approximately 90% live underground. On average, there are up to 50,000 species in a single teaspoon of soil. That teaspoon can hold more individual microbial cells than there are people on the Earth. What is the major role of all these organisms? They help protect plants, encouraging vigorous growth. Many microbes are in the business of destroying pollutants that build up in the soil, with a potential to interfere with plant growth and development. Did you know that plants can actually communicate with one another? They send chemical messages, via soil microorganisms, to their neighbors, warning of an impending attack by a particular enemy. In response, forewarned plants produce powerful protective chemicals to destroy the attackers. This phytochemical buildup makes these plants superfoods which when consumed have the power to protect us from inflammation and disease. It is disconcerting to realize that the mega-farming methods employed by giant industrial farms, by undermining the soil microbiome, destroy vital nutrients and powerful antioxidants produced by microorganisms: From 1936 to 1999 calcium levels in foods like kale, broccoli, carrots and onions have dropped 27%. Vitamin C levels are now 30% lower.

What is happening to the quality of the food we eat? Current methods of raising, producing, hybridizing, genetically modifying, processing and packaging our food leaves us with less nutritious food. As one scientist put it, we went from preserving our foods with healthy bacteria to embalming them with chemicals. Humans and other animals cannot synthesize minerals like iron, zinc and magnesium; we need to get them from our plant food. And plants, in turn, rely on microorganisms in the dirt demineralizing rocks, releasing these minerals to be more readily absorbed.

SBOs (soil-based organisms) are the revolutionary new probiotics being sold in the marketplace. We are eating actual dirt!! Yet we have been told that dirt is bad, germs are bad, bugs are bad, and weeds are bad: so we bleach, sanitize, inoculate, irradiate, pasteurize, use antibiotics, poison our gardens, and spray with toxic chemicals. While the USA represents just 2% of the world population, we use 24% of all pesticides. What have we achieved? From 1997 to 2011 food allergies in children have increased by 50%. Fifty million Americans now suffer with autoimmune problems.

Children raised on farms have fewer allergies and asthma attacks. Scientists have found that microbial samples drawn from farm children demonstrate greater diversity. A healthy gut is filled with diverse microbes, the more kinds, the better. Kids playing in mud and “eating” the dirt increase the microbial diversity of their guts. Gardeners working the soil, planting their flowers & veggies, also increase their gut microbial diversity. Eat a tomato right off the vine; enjoy that cuke or green bean before you wash it. As Henry David Thoreau aptly stated, “We can never have enough of nature”. We are what we eat, and the food we eat is only as healthy as the dirt in which we grow it.

~ Carole Dupont ~



The tints of autumn . . . a mighty flower garden blossoming under the spell of the enchanter, frost.
~ John Greenleaf Whittier

A Hike on the Mt. Frissell Trail, Mount Washington

Saturday, October 1, starting at 9 a.m.

Leaders: Bob and Dawn Cantin

Registration: Please call Bob at 413-657-7421

Meeting Place: Friendly's parking lot, just off Exit 3 of the Mass Pike.

Join us on this moderate, 7-mile round trip hike to the summit of Mt. Frissell. From our meeting spot, we will drive to the the parking area at Mount Washington State Forest. We will start our hike along the Ashley Hill Trail and then connect to the South Taconic Trail. This route will offer great views of the area; maybe we'll even catch a glimpse of the parasailers once we reach the summit. After our lunch break we will walk to the tristate marker and then proceed back along a different portion of the Ashley Hill Trail. Wear sturdy hiking boots and bring lunch, water, and binoculars. Rain cancels.

Hiking the Holyoke Range, Amherst

Sunday, October 2, starting at 10 a.m.

Leaders: Dave and Suzy Gallup

Registration: Please call Dave at 413-525-4697

Meeting Place: Notch Visitors' Center, Route 116, in Amherst

We will be hiking the Metacomet-Monadnock Trail to the top of Mt. Norwottuck, the highest mountain on the Holyoke Range. Along the way, we will discuss the local geology and forests. After lunch on the summit of Norwottuck, we will hike to the “horse caves”. There we will trace the steps of Daniel Shays. Legend proclaims that, in 1787, Shays escaped to the horse caves on the range after an ill-fated attempt to raid the Springfield Armory. From the horse caves, we will connect to the Robert Frost Trail on our way back to the Visitor's Center. We suggest that participants read about Shays' Rebellion (we recommend the entry at www.encarta.msn.com) and bring a favorite Robert Frost poem to read. Please wear sturdy footwear and bring a snack/lunch and water. This is a 3-mile, moderately strenuous hike.



It was a beautiful bright autumn day, with air like cider and a sky so blue you could drown in it.
~ Diana Gabaldon

The Natural History of Alaska

Wednesday, October 19 at 7 p.m.
Tolman Auditorium, Springfield Science Museum
Presenter: Sonya Vickers



Alaska is a wonderland for anyone interested in geology, wildflowers, wildlife, and huge national parks. Sonya will compare her recent trip to Alaska to her experiences on a summer-long backpacking trip there in 1974. Since then, new national parks have been established, and others have been enlarged. On her recent trip, Sonya visited the new Wrangell-St. Elias National Park, which is six times the size of Yellowstone and is now the largest of all the National Parks. Other changes are more ominous. Climate change has diminished Alaska’s glaciers, and the Alaska Pipeline has changed its landscape. A large part of the state has permanently frozen soil that will be releasing methane as it melts in the warming climate. Methane is many times more potent than carbon dioxide as a greenhouse gas and has the capacity to greatly accelerate global warming. Still, some aspects of Alaska remain comparatively unchanged. The very long summer days and the very long winter nights pose a challenge for both the wildflowers and the birds and mammals that call Alaska home. There are no snakes, no poison ivy, but lots of big bears. Come and see the changing face of Alaska through a naturalist’s eyes.

A Stroll at Ashley Reservoir, Holyoke

Thursday, October 20, starting at 9:30 a.m.
Leader: Colette Potter
Registration and Meeting Place: Please call Colette at 413-786-1805

Stroll along this scenic trail that rambles round and about various ponds, lovely all year round, even in November’s subdued palette. Bring your binoculars and dress for the weather. Bad weather cancels.

Hiking at the Marsh-Billings-Rockefeller National Historical Park, Woodstock, VT

Saturday, October 29, from 8:30 a.m. to around 6 p.m.
Leaders: Tom and Nancy Condon
Registration: Call Nancy at 413-297-0778
Meeting Place: Barnes & Noble parking lot, Holyoke. From there, we will carpool for the 2-hour drive up to Woodstock

George Perkins Marsh, Frederick Billings and his daughters, and Laurence and Mary Rockefeller have each made tremendous strides in promoting environmental stewardship in their own special ways. The contributions of each of them is reflected in this piece of property which they lived on and cherished. Now this 550-acre woodland, with 20 miles of carriage roads and hiking trails, is a national park. It tells the story of the evolving nature of land stewardship from 1800 until today.

Join us for a day investigating the vision of these men and women. We will start with a guided tour of the Mansion built by Charles Marsh in 1805-07. It contains an impressive collection of the 19th century art that influenced the environmental movement. Then we’ll enjoy a 30-minute award-winning movie depicting how these environmental stewards contributed to a national movement. Then we will embark on a roughly 2-hour hike around the trails and carriage roads, visiting historic buildings, demonstration forests and inspirational vistas. Trails are easy, with some inclines. Bring a lunch, hiking boots and water. Join us for a light dinner afterwards.



November the seventh
The last
Faint cricket
~ Jack Kerouac

NOV.
Meeting**The Delmarva: Land Between the Waters**

Wednesday, November 16, starting at 7 p.m.
Springfield Science Museum, Tolman Auditorium
Speakers: Tom & Nancy Condon



From Memorial Day to Labor Day every year Ocean City ranks as Maryland's second largest city. Tourists stream in from the Mid-Atlantic and Northeast to lie on the beach, stroll the boardwalk, and eat crabs. But from Labor Day to Memorial Day, when the crowds have faded away, the Delmarva Peninsula is a place for wildlife. Bordered by the Atlantic Ocean with its warm, moist Gulf Stream and the Chesapeake and Delaware Bays, offering sheltered areas, thousands of birds stop here as they migrate along the East Coast. Horseshoe crabs come to the peninsula to spawn every year. Their presence and protection is vital to the health of the area's ecosystem and bird populations. There are mammalian visitors, too, including the endangered Delmarva fox squirrel and the feral ponies of Assateague and Chincoteague Islands.

Join naturalists Tom and Nancy Condon as they explore the unique conditions which make this area an important ecological zone and examine the natural history of some of the area's most unusual species.

An Autumn Walk at Fanny Stebbins Memorial Wildlife Refuge, Longmeadow

Thursday, November 17, starting at 9:30 a.m.
Leader: Colette Potter
Registration: Please call Colette at 413-786-1805

Join me for a fall walk. We will be looking for fall flowers, warblers, and whatever we can find in nature. Bring your binoculars and dress for the season. Bad weather cancels.

Hike to Goat Peak and The Eyrie on Mt. Tom, Holyoke

Saturday, November 19, from 9 a.m. to 2 p.m.
Leaders: Nancy and Tom Condon
Registration: Call Nancy (413-297-0778)
Meeting Place: Mt. Tom State Reservation, near the Visitor Center and Playground

With a clear day, we'll be able to see for miles and miles from atop the fire tower on Goat Peak. We'll have a 360-degree view of the Connecticut Valley, Holyoke Range, Pelham Hills, and the towns nestled in amongst the forested landscape. We'll learn a little about the geologic forces that shaped our terrain and hopefully see long distances through leafless trees.

This hike is moderately difficult, with some short, steep sections. Some of our travels will be along an old washed-out road and the rest on maintained trails

through the woods, including part of the New England National Scenic Trail. Bring a lunch and plenty of water and hiking boots. Dress for the weather. Bad weather cancels.

A Peaked Mountain Hike – Hike Away Your Thanksgiving Holiday (say goodbye to the pie), Monson

Sunday, November 27, starting at 10 a.m.
Leaders: Dave and Suzy Gallup (413-525-4697)
Meeting Place: Burlington Coat Factory at the shopping mall, Allen and Cooley Streets, Springfield

Join us to walk off those calories from that Thanksgiving dinner! We will start by hiking to the summit of Peaked Mountain in Monson, which offers incredible vistas of the valley below. From the summit, we'll be able to see Mt. Monadnock in New Hampshire! This is a moderately strenuous hike. Bring a lunch and plenty of water. Sturdy hiking shoes are recommended – and don't forget your binoculars! Bring water and lunch or snacks. Rain cancels.



Wind warns November's done with. The blown leaves make bat-shapes, Web-winged and furious ~ Sylvia Plath

Annual Late Fall Hike at the Quabbin, Belchertown

Saturday, December 3, starting at 10 a.m.

Leaders: Dave and Suzy Gallup

Meeting Place: Crystal Springs Plaza, near the junction of Routes 9 and 202

It's once again time for our late fall hike! Our destination this year is Gate 15, which takes us on a wonderful loop hike, with great views of the northern section of the Quabbin, which has many stone walls and farm sites. There is a chance of seeing eagles and perhaps hearing loons! We have seen moose tracks on the sandy beaches. It's a great hike, and one of the most beautiful areas to explore. Bring your lunch, hot drinks, and binoculars. Dress appropriately for the weather, and wear sturdy waterproof shoes. This year, because of the drought, we should be able to get across that stream!

Walk at Ada & Archibald MacLeish Field Station, West Whatley

Saturday, December 10, starting time TBA

Leader: Carole Dupont

Registration: Call Carole at (413) 896-0124 or email her at drbyo@verizon.net for meeting time, directions and to register.

This will be a moderate, 3-mile hike on the beautifully scenic trails of the Ada & Archibald MacLeish Field Station in West Whatley. Along the way we will spot experimental orchards of varying species of chestnut trees, as well as an interesting challenge course.

Following the hike & lunch, Reid Bertone-Johnson, the field station manager, will lead a tour of the interesting on-site green classroom, where we will learn how it meets rigorous environmental standards. Bring plenty of water, snacks, and lunch. If weather is wintry, be sure to wear proper attire, and consider bringing hiking poles, too. If there's an early snowfall, we may have to dig out the snowshoes.

An Evening with Naturalists, Hampden

Saturday, December 10, starting at 7 p.m.

Host: Sonya Vickers

Registration: Please call Sonya at (413) 566-3406 to register and for meeting place.

It's that time of year again, when naturalists gather around the hearth to celebrate, with food and drink, a year of discoveries and friendship. There will be desserts and refreshments to share, so let us know if you would like to bring something. Also, if you have a picture or object you would like to tell the group about, please bring it. Since extreme weather cancels, be sure to call to register so you will be notified.

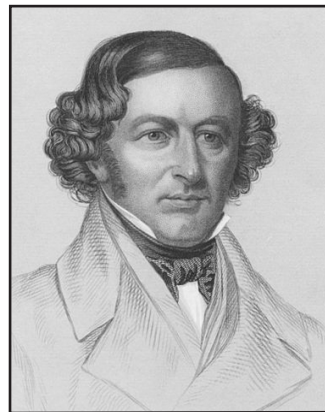
The Keystone Arches and the Opening of the West, Chester

Saturday, December 17 from 10 a.m. to 3 p.m.

Leaders: Nancy and Tom Condon

Meeting Place: Chester Post Office, 309 Route 20

Back in 1840, Major George Washington Whistler,



father of James McNeil Whistler, surveyed a path for a railroad to cross the Berkshires. It was considered an impossible task – “a railroad to the moon” – but also a necessity to keep the merchants of Boston competitive with those in New York City, with its Erie Canal. And you

thought that the Red Sox and Yankees were the origin of this interstate rivalry! Today, five arch bridges still cross the West Branch of the Westfield River, easily reached by the Keystone Arch Bridges Trail. Join us to learn more about the fascinating people and history of the area and to enjoy an early winter hike through the tranquil woods. Come prepared for the weather. Bring a lunch, sturdy shoes, and poles, if you like, plus a love of history.

WINTER SOLSTICE PARTY

Wednesday, December 21, starting at 7 p.m.
Tolman Auditorium, Springfield Science Museum
Presenters: You
Emcee: Nancy Condon (413) 297-0778

Our annual holiday meeting is an opportunity for you to share with other club members your most memorable and interesting nature and travel experiences. Have you visited someplace you would recommend to others? Do you have photos of Naturalists' Club events from this past year? We want to hear from you. Show us some of the highlights, by way of slides, PowerPoint, or photo album. Presentations should be no longer than 10 minutes in length. Also, please contribute to the display of intriguing natural objects or pictures. Bring artifacts or natural treasures to show off in the nature display. Even if you don't know exactly what it is, bring it along and we'll see if we can channel the group's combined wisdom to answer your nagging nature questions.

Part of the fun, too, is sharing each other's wonderful holiday treats. Bring a holiday dessert to share during the social hour. Let's celebrate this first day of winter together. Please call Nancy to get on the roster for presentations.

In memoriam

The Club has received contributions in memory of long-time club member Ernst Dittmer from Virginia Danforth and Gail & Larry Wood.

The Naturalist's Reading List

At a recent Naturalists' Club Board meeting, a casual conversation about summer reading quickly generated a long list of recommended books —plus some smartphone apps — about natural history, naturalists, and conservation. Inspired by this conversation, we're debuting a new Newsletter section, *The Naturalist's Reading List*. This section aims both to provide a forum for group members to recommend books of likely interest to others in the group and to announce occasional events for Club members to gather to discuss books announced in a previous newsletter.

Do you have a book to recommend?

Have you read a great book that could be of interest to others in the Club? Are you interested to lead a book discussion? Please email us at natclubnewsletter@gmail.com so that your recommendation can be included in an upcoming issue of our Newsletter. We look forward to your input!

Recommended Readings, Fall/Winter 2016

The Naturalist: Theodore Roosevelt, A Lifetime of Exploration, and the Triumph of American Natural History by Darrin Lunde, 352 pp.

Recommended by Dave Lovejoy. Lunde provides an analysis of the accomplishments in natural history of Theodore Roosevelt, perhaps better known for his hunting exploits than his considerable contributions to natural history and the development of the natural history museum.

Join us for a Book Discussion!

Dave Lovejoy will lead a discussion of Lunde's book, followed by a tour of the Westfield State University Museum, especially its mammal and birds collections. Tentative schedule: Evening of Friday, January 20.

Your Brain on Nature: The Science of Nature's Influence on Your Health, Happiness and Vitality by Eva M. Selhub and Alan C. Logan, 256 pp.

Recommended by Nancy Condon

I found this book to be reaffirming of the inherent pleasure we all find in going out into nature. In a comfortably easy manner, the authors document scientific studies showing the positive effects of being outdoors.

THE NATURALISTS' CLUB**MEMBERSHIP**

In the July to September Newsletter, we announced a new option for email delivery, which many members have now chosen. This option reduces mailing costs, is quicker, and is in keeping with the Club's environmental-preservation goals. To select electronic delivery, notify Dave Lovejoy (*dlovejoy@westfield.ma.edu*).

Members receiving a paper copy of the newsletter will see "16-17" on the label if dues are paid for the current year. Those with "15-16" owe dues, which can be sent to the treasurer. For members receiving the newsletter electronically, the subject line will indicate dues status.

DAVE LOVEJOY
THE NATURALISTS' CLUB
DEPARTMENT OF BIOLOGY
WESTFIELD STATE UNIVERSITY
WESTFIELD MA 01086

The form below need not be completed unless your contact information has changed (please send your email if you have not already done so).

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

Renew your membership

 Name

 Address

 Phone Number

 Email

 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.

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