



Biodiversity

By Jim Denham

Arguably, the single most comprehensive word that best describes and measures the condition of the environment is **biodiversity**. We are constantly exposed to terms such as climate change, global warming, habitat loss, invasive species, pollution, overexploitation, environmental degradation, and many more. These terms alert us to what is happening in our environment, much of it caused by humans. The term biodiversity tells it all and by paying attention to it, thinking about it, and doing something to address it, we can learn to be aware of the environment's health. It is analogous to the "canary in the coal mine" that was used in the past to indicate danger.

What Impacts Biodiversity?

While biodiversity has been defined with many different words, simply put, it is the total sum of all the living organisms that exist on our earth, which have been the product of hundreds of millions of years of evolutionary history. However, the term is filled with complexity. For example, we sometimes take the view that some plants and animals are "less desirable" than others. Are they really or have they established themselves through normal evolution and adaptation?

The main drivers of diversity loss are the following. Habitat loss causes thinning, fragmenting, or outright destruction of an ecosystem's plant, soil, hydrologic and



nutrient resources. Invasive species significantly modify or disrupt ecosystems. Overexploitation results in excess harvesting of aquatic or terrestrial animals depleting the stocks of some species while driving others to extinction. Pollution adds substances to

the environment at a rate faster than it can be rendered harmless. And, finally, climate change, associated with global warming, is caused by increased levels of greenhouse gases.

Why is Biodiversity important?

The importance of biodiversity can best be highlighted by the loss of species and habitat. One out of four amphibians, birds, conifers, and mammals and six of seven turtles are facing extinction. Every 60 minutes 240 acres



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of natural habitat are destroyed. 75% of the world's fisheries are fully or over exploited. And an estimated 80% of the decline in biodiversity is caused by habitat destruction.

Among many reasons, biodiversity is important because it maintains balance in ecosystems, promotes sustainability and growth, speeds recovery from natural disasters, protects freshwater resources, provides food security, and maintains the food chain in nature. By maintaining soil, air and water quality, biodiversity enables all living things to thrive with each other



in balance. Finally, biodiversity is important to everyone who enjoys nature and the outdoors. Its recreational benefit contributes to our physical and mental health.

What can we do about it?

To feel empowered to address what might seem a daunting, impossible challenge, we can each in our own way measure biodiversity where we live. Some of the key metrics are species richness (total number of species within an area), endemic species (species that are specific to our region), ecosystem diversity (the number of ecosystems in our region and those which are unique). Admittedly, while some of the measures may be difficult to monitor, the point is to pay attention to our local world and take steps to care for it.

We asked the Essex Land Trust's Scientific and Technical Advisory Committee for their thoughts on biodiversity. Following is their input.

Tom Worthley (Extension Professor and Forester at UConn for almost 25 years.):

The first thing that comes to mind is that in the face of global change in climate, etc., biodiversity is the key to environmental resiliency. It is also our best insurance policy for continuing environmental benefits for human beings.

Steve Gephard (recently retired fisheries biologist from the Connecticut Department of Energy and Environmental Protection):

When it comes to biodiversity, all species matter. Species of ants and spiders are just as much part of it as brook trout, eagles, ospreys, and sugar maples.... It seems unlikely that the ELT could effectively monitor "biodiversity", per se. What it could do is monitor a few key species that are found on it preserves and use such monitoring as education and outreach for members and students as well as long-term monitoring for Essex.

We are not wise enough to know what hands-on activities will promote the conservation of ALL biodiversity. But I think we must think at the habitat level not the species level. If we know that there is currently habitat that supports a rich and productive native biodiversity, we need to protect that habitat and

assume with such protection, the species can fend for themselves. That is a reason for the ELT to seek to protect a diverse portfolio of preserves, so they capture diverse types of habitats from tidal marsh up to rocky crags.

Dr. Juliana Barrett (Extension Educator at UConn and a faculty member of both the Connecticut Sea Grant Program and the Center for Land Use Education and Research):

We need to think about what would change or threaten the biodiversity of the area. Of course, I'm thinking about climate change, and related to this, invasive species. I think these two threats are going to have the biggest impacts on biodiversity in Connecticut. Invasives (both aquatic and terrestrial) may be the biggest threat in the short term with major changes by 2100 due to climate change.

Chet Arnold, ELT Board Member (formerly at UCONN as a Water Quality Educator and the Director of the Center for Land Use Education and Research):

Although I agree that climate change and invasive species are probably the biggest threats to biodiversity in this region, globally and maybe even locally we can't forget about good old habitat loss. Of course, the three are all related but I don't think there's any doubt that even without climate change we have been losing species right and left due to the destruction of the places that they live by development and agriculture.

Volunteer Spotlight: Scott "The Real" McCoid

Over 70 people visit The Millrace Preserve in the heart of Ivoryton everyday to enjoy the meandering river, woods, groomed paths, and open meadow. What most visitors may not notice is the tremendous effort it takes to maintain this scenic property. Others have been fortunate to observe and visit with our Millrace Steward, Scott McCoid as he hacks away at invasives, clears paths, tends to the bridges, and prunes plantings. Scott has been The Millrace steward for a little over 2 years.

During his time at The Millrace, Scott was instrumental in constructing the new entrance ramp and bridge off Ivory Street. Scott also built and installed a beaver dam bypass system to prevent flooding in the section just north of the Ivory Street entrance. When beavers were devouring our new plantings along the river, Scott led a team to protect the plants with wire fencing.



New entrance ramp at Ivory Street entrance to The Millrace

This past year, Scott conducted extensive research into the history of the millrace, for which the property is named, as well as of the town of Ivoryton. Scott used his research to update the various historical signs we have throughout the property. To celebrate these improvements and the



anniversary of the Ivoryton Flood of 1982, Scott led a land trust hike through the property. It was so popular, over 75 people attended, and portions were broadcast on local TV.

That's a significant contribution to the land trust for just one person, but in Scott's case, it's just the tip of the iceberg. Prior to taking over The Millrace, Scott was the co-steward then lone steward at Johnson Farm, just up the hill from The Millrace. At Johnson Farm, Scott was instrumental in clearing invasive vines along many of the fences. Scott even cut the shrubland section of the property using a 1960's era tractor and

brush hog attachment. This task had been turned down by contractors and other stewards simply ran away from it! Cutting this area was very important for the health of the shrubland section as it is designed to be an early growth (3-5 year) forest habitat. (Note to Scott - it's about time again!) Scott has also led various tours through Johnson Farm, always conducting historical research to make his talks highly informative and fun.

When Scott is not working tirelessly at The Millrace, or continuing his historical research, he can often be found helping other stewards on a variety of projects. Scott and his son built several benches that are in use at various land trust properties. He has helped install bat houses, clear invasives at multiple properties, installed bridges, cut fallen trees, and so on and so on. When you really need a hand, you can always count on Scott to show up.

When it comes to Stewardship, Scott is **"the real McCoid!"**

Volunteer Opportunities

The Essex Land Trust (ELT) relies on the generosity of our members to fulfill our mission including preserving and managing our 657 acres of open space. The significance of volunteer involvement cannot be underestimated. We calculate that volunteers contribute more than 4,800 hours of their time annually, an annual value of over \$130,000. We have several volunteer roles below that we are looking to fill. Most of these roles involve less than 5 hours/month. We encourage you to reach out to Jeff Croyle at croylejeff@gmail.com if you are interested or want to learn more about how you can help.



Stewards – Serve as steward or co-steward for one of our preserves. Work involves maintenance of trails, creation of new trails, volunteer-appropriate tree work as needed, habitat improvement and completion of annual site reviews. Experience with general garden and landscape tools is a plus.

Trail Monitors – Perfect for individuals who routinely hike specific trails and are willing to report problem situations (downed trees, litter, parking lot issues, etc.) to the Preserve Steward.

Habitat Volunteers – Support our effort to safeguard and expand existing habitats for bees, birds, and bats. Assist with the construction, installation, care and monitoring of various nest boxes, bat houses or help care for our 3 pollinator gardens.

GIS Mapping Volunteer – Looking for an individual with experience or interest in geomapping. Work involves using ArcGIS or similar mapping tool to convert current ELT Preserve maps to geoPDFs, develop new maps, enter trails into CT Trail Finder, create story maps, etc.

Membership Support – Provide back-office support including updating our donor database, assist with membership drives, generation of reports, etc. Experience with mail merge, Excel or Access is a plus. ELT will provide donor database training.

Writers/Researchers – Work with Communications Director to identify and create articles for our newsletter, *Woods & Waters*.

Photographers – Take photos of our preserves and ELT events, providing high quality photos for our Instagram and Facebook pages and our website.

Drone Video Operators – Support the ELT with drone videos of preserve boundaries, interesting habitats, water features, etc. Experience with video editing a plus.

Event Planning Support – Assist the Program & Events Committee with onsite support for events, including greeting, setup and breakdown, publicity, etc.

Steward's Handbook

The recently published Essex Land Trust Steward's Handbook is an important and useful resource for new stewards and volunteers who join the land trust in caring for our 23 preserves. Created last summer by a team lead by the Preserve Management Director, Leif Owens, the booklet covers 8 different areas: Getting to Know your Preserve, General Responsibilities, Common Issues, Equipment & Tools, Key Resources and Contacts, Expense Approvals, Miscellaneous Items, and Invasive Management Guidelines. A printed copy is issued to each steward and an electronic version can be made available for those interested by contacting Leif Owens.

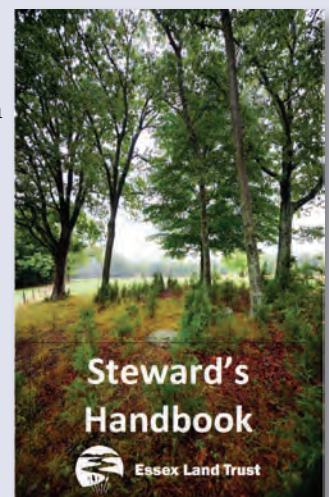


Photo courtesy of Jody Dole

Follow the Falls Part Three: Ivoryton

The third and final phase of the collaborative

Follow the Falls

project is nearing completion. The Essex Land Trust (ELT) has partnered with the Essex Historical Society (EHS) in this three-part history of our community's link to the Falls River. The project explores Ivoryton's development

from a sleepy hamlet to a bustling factory village to today's residential suburb. Like earlier *Follow the Falls* collaborations, this third phase includes an illustrated booklet, available in print and digital form, a lecture series, walking tours and additional joint programs.

The writing team, comprised of Melissa Josefiak, Fred Szufnarowski, Jim Powers, Sherri Clark, Steve Knauth, Hank McNerny, and Jim Denham, explored the research and community conversations surrounding the village's history, some of which may surprise our readers. This updated history explores the complex relationships within the 19th and 20th century ivory trade, concentrated in



Photo Courtesy of the Essex Historical Society

Zanzibar, East Africa, and its far-reaching impacts on global economics and human and animal populations. It also explores the area's geography, its use by indigenous peoples and the stories of its ethnic neighborhoods.

EHS and ELT look forward to releasing the booklet later this year. Please keep an

eye out for our mailings, emails, and social media posts for upcoming events.

We look forward to sharing the Ivoryton installment as it completes the story of the three villages under the *Follow the Falls* theme. It unites our shared vision of exploring the historic and natural significance of the Falls River area.

Those interested in reviewing the first two parts of this project (*Falls River Cove and Centerbrook: Crossroad – Community – Change*) can go to this link: <https://essexlandtrust.org/notable/>

Essex Land Trust Instagram Needs You!

Since kicking off the land trust's Instagram account this past October, we now have 188 followers. We are aiming to double this number as we encourage everyone to post images of their outings on Essex Land Trust preserves. Share your best shots of landscapes, wildlife, and any outings. We will continue to post our own imagery, updates about upcoming events, fun facts about the wide variety of plants and species that occupy our preserves and reposts from community members.

As we try to grow the community as quickly and effectively as possible, we encourage you to tag us with **@EssexLandTrust** and hashtag your own posts with **#EssexLandTrust**.



Public Use and Dog Policy



Esex Land Trust preserves are popular destinations for exercise, exploration, and enjoyment of nature.

Our preserves are free to use and open to all.

Increasingly, some of our preserves are also a destination for private events, which the land trust allows provided permits are applied for and detailed rules are followed. Additionally, the land trust has a policy of allowing visitors to bring their dogs who undoubtedly enjoy the opportunity to stretch their legs. In this case, the fundamental rule is that dogs must be always under the control of their handler.

The following provides a summary of our policies regarding public use and dogs on land trust preserves. A more complete statement including use permit applications can be found on the land trust's website: <https://essexlandtrust.org/publicusedogpolicy/>

Public Use for Private Events

An approved permit is required for use of our preserves by any non-ELT group with planned attendance of 10 or more individuals or if a donation is suggested or required. Permits must be returned to the land trust at least 2 weeks before the event date. Events cannot be announced until after the permit request has been approved in writing. Users

are responsible for removal of all trash and leaving the preserves in the same state as when they arrived.

Dog Policy

Dogs are welcome on Essex Land Trust preserves, subject to the following conditions:

Handlers shall comply with all state and local laws, including Connecticut General Statute § 22-364(a) which provides that "No owner or keeper of any dog shall allow such dog to roam at large upon the land of another and not under control of the owner or keeper or the agent of the owner or keeper" Other requirements include the following: Handlers must clean up after their dog(s); Dogs must be licensed and display a valid rabies tag; Handlers must always have in their possession a leash no greater than 7 feet in length, must not allow dog(s) to approach another person or dog unless invited, must keep dog(s) out of abutters' properties, and not allow dogs to chase wildlife.

If a dog bite occurs, immediately contact Essex Animal Control at 860-767-4340 x 160 or 203-780-1311. For emergencies call 911.

The Lower Connecticut River

19 Town Challenge

The Lower Connecticut River Land Trust, in partnership with local land trusts and towns, challenges you to hike as many trails as you can in the Lower Connecticut River Region that are in or pass through our towns and preserves through December 31st, 2023.

It's easy to join the challenge: Take as many hikes as you can, but we challenge you to take at least one hike in each community. For more details and a list of the towns and land trusts to get information and maps for their trails, check out this link: <https://essexlandtrust.org/notable/>

When on your adventure we encourage you to take a picture of the large maps posted at most trailheads with your cellphone before you hike.

When you have completed your adventure fill out our on-

line form. Everyone who registers will be placed on the Wall of Champions. Participants can choose to purchase challenge themed apparel depending on their level of donation.

All proceeds from the LCRLT Trail Challenge will benefit a stewardship fund dedicated to the care of the preserved land of the lower Connecticut River land trusts and communities.

The Mission of the Lower Connecticut River Land Trust is to conserve, study, steward, and promote the unique values and scientific significance, natural and working lands, and historic, ecologic, cultural, and scenic resources of the communities of the lower Connecticut River Valley Region. It collaborates with local land trusts in pursuing this mission.



Coming Events – Mark Your Calendar!



Windswept Ridge Hike & Happy Hour **Thursday, March 16th, 5:30-7 PM** **176 Westbrook Road behind Essex Financial Services**

Come enjoy Essex Land Trust's Windswept Ridge Preserve for a moderate 45 min hike followed by Happy Hour. The property overlooks the Mud River valley farmland once known as "Scotch Plains" so it's fitting that we go to Scotch Plains Tavern after the hike. The Tavern is just a quarter mile away at 124 Westbrook Rd. Rain date is the following Thursday 3/23/23.

Canfield Meadow Woods Hike & Happy Hour **Saturday, April 15th, 12-2 PM** **Canfield-Meadow Woods** **Deep River Entrance**

383 Main Street, Deep River
A moderate, 4-mile hike at Canfield Meadow Woods. Follow the event with a short drive to High Nine Brewery, 6 Winter Avenue, Deep River for a socializing happy hour. Shared by Deep River and Essex, Canfield-Meadow Woods Nature Preserve is made up of more than 300 acres of hilly, forested land with a wide variety of terrain. Sixteen trails wind through mixed old and new growth forest, and the preserve's many rocky outcroppings are a highlight. The hike starts promptly at 12 noon. Meet at the parking lot of the Deep River Canfield entrance on Rt 154. Overflow parking arranged for at Deep River Market across the road. Rain date is the following Saturday 4/22/23.

Introduction to the Essex Land Trust **Saturday, April 22 at 2 PM** **Essex Library, 33 West Avenue, Essex**

Want to learn more about the Essex Land Trust and its role in the community? President Jeff Croyle will

be presenting an overview of the ELT's mission and accomplishments, its 2023 calendar of events and available volunteer opportunities. Established in 1968, the land trust encourages new residents and those interested to ask questions and learn more about the land trust's preserves which cover over 650 acres across Essex's three villages.

Essex Land Trust Annual Meeting **Thursday, April 27th, 5-7 PM,** **Essex Meadows, 30 Bokum Road, Essex**

Essex Land Trust members are invited to join the annual meeting and cocktail reception. Light food will be served. Ticket prices for the buffet will be announced later. Purchase of tickets will also be possible at the door. The business meeting and presentation that follows the reception are open to the public.

Annual Essex Land Trust BYO Picnic & Concert

Saturday, June 3rd 5:00 -7:00 pm,
Essex Main Street Park
12 Main Street, Essex

The Essex Land Trust is hosting a live music concert featuring Mass-Conn-Fusion Band, back for a repeat performance. This is a BYO picnic event, so come out with picnic baskets, blankets, your choice of beverages, and be prepared to relax, dance, and enjoy. Free admission. All are welcome.

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