The official newsletter of Avalonia Land Conservancy

# AVALONIA Trails

**FALL** 2023



Photo by Gail Kahover

#### **KILLER HEAT: A CURSE AND AN OPPORTUNITY** FOR AVALONIA

BY BRUCE FELLMAN

According to the National Oceanic and Atmospheric Administration, the eighth month of 2023 was the warmest August worldwide in NOAA's 174 years of record-keeping.

The official newsletter of Avalonia Land Conservancy

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#### PRESIDENT'S MESSAGE

A WORD FROM DENNIS MAIN

The return of the fall's cooler weather is a welcome respite from this year's record heat. As Bruce Fellman points out in our cover story, this August was the warmest August recorded worldwide in the last 174 years.



Here at Avalonia, we continue to monitor the effects of rising temperatures on our preserves. Our stewardship team has embarked on a number of reforestation/ resilience/climate change mitigation projects and will continue to do so. See Page 7 for an update on a project at Hoffman Evergreen Preserve to plant trees and shrubs more suited to warming temperatures.

Weather and scientific predictions indicate precipitous changes in climate, likely causing major declines in ecosystem health. Avalonia's board strongly believes that undeveloped, natural land is key in protecting native ecosystems, and that we can mitigate anticipated climate impacts through preservation, restoration, and appropriate stewardship of land.

The board also believes that engaging people in learning about and caring for the environment is a key component in caring for our planet. Understanding that all people can benefit from time in nature, the board is committed to engaging people across diverse communities. As such, Avalonia has been targeting acquisitions in more populated communities. Most recently the City of Norwich transferred 27 acres to Avalonia for the new Hunter Brook Preserve allowing the city's 40,000 residents the opportunity to interact with nature now and in the future.

Avalonia's board is aligned in envisioning the southeast Connecticut region as environmentally and socioeconomically healthy and resilient. Avalonia plays a vital role in that vision.

**Avalonia Trails** is a biannual publication that communicates Avalonia's work to acquire, protect, and maintain land of high conservation and habitat value; combat climate change for the benefit of people and wildlife; and ensure healthy, livable communities for now and generations to come.

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#### **CONTINUED FROM COVER**

I wasn't surprised.

A few days before my annual August wildflower walk at the Preston Nature Preserve, folks started dropping out, questioning the wisdom of exploring an open meadow in the frighteningly hot sun. I sympathized — heat is a bona fide killer — but amidst a backdrop of climate-change-driven wildfires, droughts, floods, and heatwaves around the world, I wasn't ready for global warming to get so personal.

To be sure, I always took extra water and sought out shade for frequent rest stops during midsummer treks to avoid overwhelming the human body's ability to sweat and produce our own air-conditioning. I also knew that no matter how plants and animals evolved to stay cool, there are upper limits to any ability to roll with the climatological punches.

As average temperatures continue to rise, scientists are documenting changes not only among individuals but also in the fundamental fabric of the natural world. Wholesale shifts in the wildlife that thrive on Avalonia refuges are not yet apparent in most areas, say observers. But in Stonington's coastal Dodge Paddock, a double whammy of heat-induced sea level rise and increased storm frequency has, notes head of Stonington Town Committee Beth Sullivan, changed the preserve from a dry, open meadow, to an often flooded wetland dominated by salt-tolerant plants.

Beth also spearheaded a major effort at Stonington's Hoffman Evergreen Preserve to augment ecological resiliency as an area originally conceived as an outpost of northern forest is forced to cope with a climate that forecasters suggest will eventually resemble that of coastal Virginia. "We planted southern species of evergreens, which are thriving," Beth explained, "and other trees and shrubs, like southern oaks, redbuds, tulip trees, and black gum, chosen for their hardiness to warmth."

### A FEW HIGHLIGHTS FROM 2023



#### **Avalonia Wins Accessibility Award**

Avalonia Land Conservancy was presented with the Connecticut Land Conservation Council's Excellence in Conservation Community Engagement Award during a ceremony in July at Cedar Wood Preserve in Norwich. The award acknowledges Avalonia's commitment to improved accessibility for people with disabilities in regard to trails, communication, and policy.

#### **Botanical Society Grant**

The Connecticut Botanical Society has awarded Avalonia grant funding to initiate a small-scale wetland restoration project on our Anguilla Brook, Northern Headwaters Preserve in North Stonington. This effort will focus on the restoration of a nearly 3/4-acre portion of an approximately 10-acre Atlantic white cedar swamp.

#### **Aquisition Update**

To date, Avalonia has conserved 5,038 acres. Other parcels are under contract or transfer agreement, and are slated to close by the end of 2023. These total about 1,000 acres in eight towns, and, when closed, would bring Avalonia's total acreage to more than 6,000.

#### "We planted southern species of evergreens, which are thriving." — Beth Sullivan

More record-setting high temperatures are certainly coming, but as the Hoffman experiment shows, these can be, to a point, managed wisely.

"The idea that we'll soon be missing familiar species that can't tolerate the heat and other changes makes me sad," Beth admits. "But I'm going to welcome new species that may soon call southern Connecticut home."

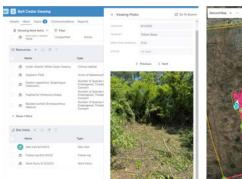






There is growing recognition of the critical role that land trusts play in mitigating the effects of climate change. As a result, Avalonia's stewardship responsibilities continue to grow as we preserve more acreage in the context of an increasingly complex set of environmental conditions.

In a summer marked by early drought, heavy rainfall, and extreme temperatures, the stewardship team has stayed active with habitat restoration projects, invasive plant management, hazardous tree removal, and numerous other activities. And while this field work is critical, equally important has been our effort to stay apace with conservation technology, to join in collaborative endeavors, and to engage in a wide range of training opportunities. In particular, staff and volunteers have participated in climate adaptation and resilience workshops and seminars; embraced advancements in land conservation software; and gained certification in chainsaw safety and productivity techniques.



(Top) Under the watchful eye of Game of Logging instructor, Bill Girard, Avalonia staff and volunteers practice felling, limbing, and a variety of cutting techniques. (Bottom) Landscape, a cloud-based software, is used to enhance stewardship's ability to manage our growing number of ecologically-diverse properties, many with specific needs.

These are the types of learning and capacity building exercises that will allow stewardship to manage Avalonia's preserves more effectively in the face of challenges brought on by a rapidly changing climate.

#### To learn more about these efforts, contact our office at (860) 884-3500 or visit our website at www.avalonia.org.

#### **RECOMMENDED READING**

The Heat Will Kill You First: Life and Death on a Scorched Planet,
July 2023, by Jeff Goodell, an American author and contributing
editor to Rolling Stone magazine whose writing focuses on energy
and environmental issues

Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants, September 2013, by Robin Wall Kimmerer, a Native American botanist, author, and American Distinguished Teaching Professor of Environmental and Forest Biology



## NATURE AND YOUR BRAIN: BACK TO THE FUTURE WITH FREDERICK LAW OLMSTED

GUEST ESSAY BY SUSAN MASINO
NEUROSCIENTIST & PROFESSOR OF APPLIED SCIENCE AT TRINITY COLLEGE

April 2023 culminated the year-long celebration of the 200th birthday of Frederick Law Olmsted. Born and buried in Hartford, Olmsted is known as the founder of landscape architecture, the designer of Central Park in New York City, and a major influencer of the eventual Organic Act (1916) establishing the National Park Service. There is much more, and Olmsted planned for the long-term future – some scholars say more than 100 years. Here we are, and his living legacy is coming to the fore in ways we are just starting to appreciate.

As one example, Olmsted's focus on nature and public health – including brain health - is a hot topic and an active area of research. It's a wonderful combination of ancient wisdom, new science and sheer common sense: we can't survive without natural systems and healthy brains. We all have

Olmsted to thank for bringing the healing power of nature into America's cities, for everyone. At a time when health concerns in cities ranged among toxins, pollution and disease, Olmsted focused on the power of nature to provide clean air and clean water and to be a source of inspiration, respite and beauty. Across the country, National Parks are not only beloved, they have quantitatively higher accumulated carbon and biodiversity and they greatly benefit local economies. Nature works for free.

Olmsted's childhood experiences in Connecticut shaped his future, and we need to reflect on his principles as we face current challenges. He observed that the stress of urbanization would wear people down (and nature would improve it). Now we know that urbanization is associated with higher rates of conditions such as anxiety, depression

and schizophrenia, among others. With the rapid pace of industrialization and development, Olmsted could see that unless public nature and associated democratic spaces were secured the land would be privatized and exploited – and beautiful natural areas would be inaccessible to most people.

In 2023, it's time to get more specific about how to optimize the benefits of local nature to solve multiple problems: climate, biodiversity and our health. We need more nature in cities, and stronger protection for

headwaters, rivers and streams, mature and old-growth forests, and numerous critical habitats. We cannot take them for granted. Olmsted reflected that nature "employs the mind without fatigue and yet exercises it" – thereby helping people of all ages and abilities, of all levels of health. It lowers blood pressure and anxiety and reduces stress hormones, and improves emotional regulation in teens. Nature can change our perceptions, improve our cognition, and increase compassion.

# DRUMROLL PLEASE! WE'VE GOT WINNERS!

#### **BEST LANDSCAPE PHOTO**

Avery Preserve by Pam Tankard

#### **BEST WILDFLOWER PHOTO**

Knox Preserve by Carolyn Baker-Reck

#### **BEST WILDLIFE PHOTO**

Dodge Paddock & Beale
Preserve by Bryn Souza







# PHOTO CONTEST

Thanks to everyone who participated in Avalonia's annual photo contest! It is gratifying to see so many people enjoying our preserves.

(1) Best Landscape Honorable Mention Knox Preserve by Jeff Korht

(2) Best Wildlife Honorable Mention Henne Preserve by Susan Chester

(3) Best Wildflower Honorable Mention Benedict Benson Preserve by Jodi Williams







#### HOFFMAN EVERGREEN PRESERVE: GREEN AND HEALTHY FOUR YEARS LATER

STORY AND PHOTOS BY SHARON J. LYNCH

Avalonia members may recall the ambitious project mounted in 2019 by the Stonington Town Committee at the Hoffman Preserve to harvest struggling, sick, and dead trees; create five clear-cut patches as well as numerous thinned areas; and, then plant nearly 1,000 new trees and shrubs specially selected for their predicted viability in an era of climate change.

Things looked pretty rough, broken, and barren for a while back in 2020, particularly in the landing area and skid trails hard used by the heavy forestry equipment. Covid intervened, making planning for the planting of new trees and shrubs challenging.

Juliana Barrett, who is with the University of Connecticut's Sea Grant Program and the principal investigator for the project, was asked recently to "qualitatively" assess the progress at Hoffman. There has been a burst of growth from both the seed bank and the newly introduced seedlings and trees—but you need to know how to spot them because the native species from the pre-existing forest are regenerating, as well as pioneer species of new grasses and plants.

The introduced redbud, dogwood, black oak, sumac, Virginia pine, and loblolly pine are thriving. The project allowed us to purchase some native tree species from Maryland and plant them among their Connecticut cousins. This creates more genetic variation for endemic species such as black oak, introducing genotypes suited to warmer weather, and allowing natural selection to decide what may thrive. The loblolly were the "southernmost" species that should succeed as temperatures rise.

Barrett noted that it is too soon to say how many of the new plantings will survive, but the forest looks healthy. Beth Sullivan, head of Stonington Town Committee and a project leader, reports that there seems to be both more wildlife and more variety of birds and animals.

Barrett was asked to share her thoughts about the successes of the project. She said that she was blown away by the number of volunteers who came out to plant trees and shrubs, and by their skills, hard work, and dedication to getting the job done.

While the project featured a successful online lecture series at UConn describing its rationale (see link below,) it is not hard to imagine that the greatest impact may have been on the Hoffman Preserve stewards, from Avalonia's members to the cub scout troops, who helped give Hoffman a new green chapter in an era of climate change.







Clockwise from top: A healthy loblolly pine from Maryland thrives where older evergreens grew at Hoffman Evergreen Preserve; Juliana Barrett's outstretched hand shows how much this redbud has grown in three seasons; This was a logging skid trail, now greened over with new growth from the seed bank.

## Finding the Right Trees

A four-part online speaker series developed by UConn's College of Agriculture, Health, and Natural Resources. To watch the series, visit: https://clear.uconn.edu/2021/03/10/finding-the-right-trees-for-the-right-time/



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## ACCREDITED NO.

#### THANK YOU FOR BEING A VALUABLE MEMBER OF AVALONIA!

Over 55 years of preserving natural habitats in southeastern Connecticut by acquiring and protecting lands and by communicating the value of these irreplaceable resources.