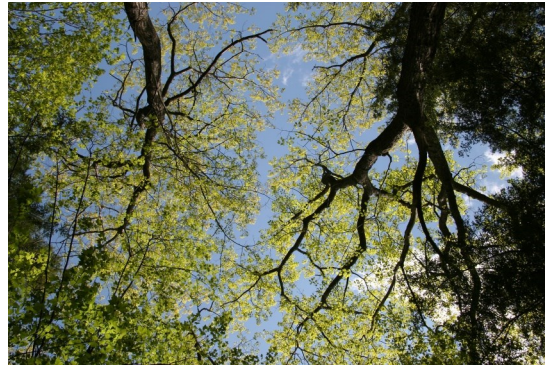


## UPCOMING EVENTS

- MAY 6** **Foods of the Delaware Highlands Gala Dinner**  
Hawley, PA
- MAY 20** **Money Does Grow On Trees: Protecting Land, Planning for the Future**  
Milford, PA, 10am-2pm
- JUNE 24** **Native Plants Walk with Dr. Ann Rhoads**  
Camp Speers YMCA, Dingmans Ferry, PA, 9am-12pm
- JULY & AUG** **Nature Walks with a Volunteer**  
Select Weekends in Bethel, NY
- SEP 16** **Community Picnic for our Members and Friends**  
Bethel, NY, 4pm-8pm
- OCT 7** **Fall Hike**  
Tusten, NY

Visit [www.DelawareHighlands.org](http://www.DelawareHighlands.org), or call 570-226-3164/845-583-1010 for more information on these events and others, and to register.

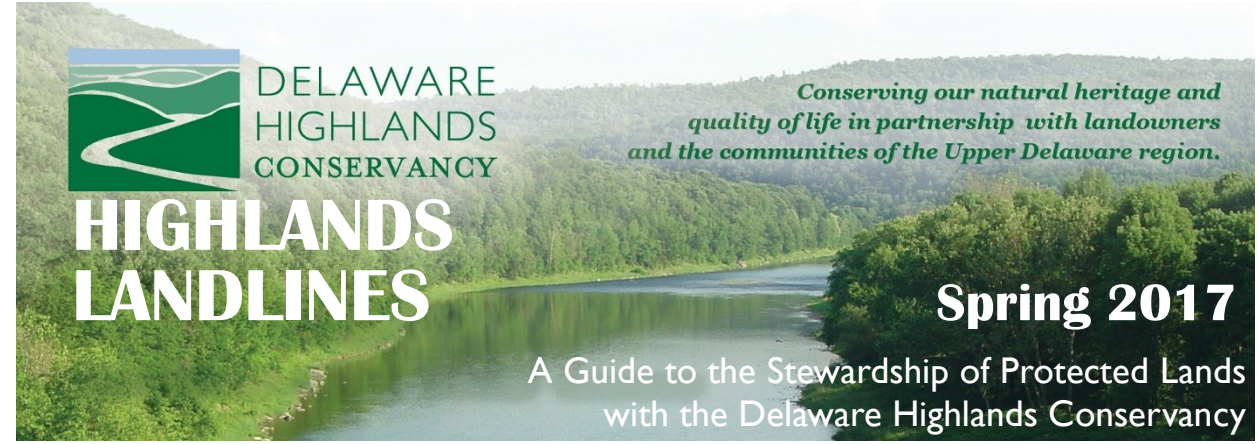
- **INSIDE**
- **A Biologist's Manifesto for Preserving Life on Earth**
- **Meet Your Stewardship Team**
- **Conservation Districts—A Local Resource**
- **Annual Property Visit Questionnaire**



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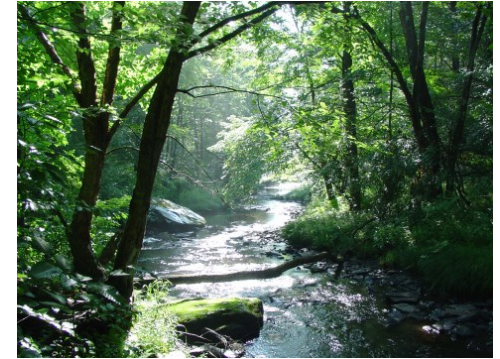


### A Biologist's Manifesto for Preserving Life on Earth

By Edward O. Wilson

We are playing a global endgame. Humanity's grasp on the planet is not strong; it is growing weaker. Freshwater is growing short; the atmosphere and the seas are increasingly polluted as a result of what has transpired on the land. The climate is changing in ways unfavorable to life, except for microbes, jellyfish, and fungi. For many species, these changes are already fatal.

Because the problems created by humanity are global and progressive, because the prospect of a point of no return is fast approaching, the problems can't be solved piecemeal. There is just so much water left for fracking, so much rainforest cover available for soybeans and oil palms, so much room left in the atmosphere to store excess carbon. The impact on the rest of the biosphere is everywhere negative, the environment becoming unstable and less pleasant, our long-term future less certain.



Only by committing half of the planet's surface to nature can we hope to save the immensity of life-forms that compose it. Unless humanity learns a great deal more about global biodiversity and moves quickly to protect it, we will soon lose most of the species composing life on Earth. The Half-Earth proposal offers a first, emergency solution commensurate with the magnitude of the problem: By setting aside half the planet in reserve, we can save the living part of the environment and achieve the stabilization required for our own survival.

Why one-half? Why not one-quarter or one-third? Because large plots, whether they already stand or can be created from corridors connecting smaller plots, harbor many more ecosystems and the species composing them at a sustainable level. As reserves grow in size, the diversity of life surviving within them also grows. As reserves are reduced in area, the diversity within them declines to a mathematically predictable degree swiftly—often immediately and, for a large fraction, forever.

(Continued on page 6)

The Delaware Highlands Conservancy is a land trust dedicated to conserving our natural heritage and quality of life in partnership with landowners and the communities of the Upper Delaware River region.

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[www.DelawareHighlands.org](http://www.DelawareHighlands.org)

Highlands LandLines is a semi-annual newsletter for landowners who have a conservation easement with the Conservancy. This publication is also available electronically.



**What is Highlands LandLines?**

You already receive the Delaware Highlands Conservancy's regular newsletter, *Highlands Journal*. Our newsletter is distributed to all of our landowners, members, and other like-minded folks who are interested in the Conservancy's activities, accomplishments, and conservation goals.

**This publication, *Highlands LandLines*, comes to you twice a year and is dedicated to landowners.** *LandLines* provides you, the landowner, with useful information and tips for the stewardship of your land and conservation easement.

**Participate in LandLines!**

We are interested in your ideas for future articles and features, or your comments on the publication in general.

We'd love to know what you think!



DELAWARE  
HIGHLANDS  
CONSERVANCY



**Save the Date!**

Mark your calendars for these exciting events coming up in 2017—and visit [www.DelawareHighlands.org](http://www.DelawareHighlands.org) to view our full calendar and register!

**June 24—Native Plants Walk with Dr. Ann Rhoads**

Camp Speers YMCA, Dingmans Ferry, PA

**September 16—Annual Free Community Picnic**

Conservancy Office, Bethel, NY

**Annual Property Visit Questionnaire**

Please help the Conservancy prepare for our annual property visits by completing the below survey and mailing to:

Delaware Highlands Conservancy Attn: Cindy Taylor  
PO Box 218, Hawley, PA 18428

Or email: [cindy@delawarehighlands.org](mailto:cindy@delawarehighlands.org)

You may also complete the survey online at  
<https://delawarehighlands.org/landowner/caring-for-your-land/monitoring-form>

Contact: \_\_\_\_\_ Email: \_\_\_\_\_

*Annual property visits allow the Conservancy to uphold the terms of the conservation easement for each property. These visits allow the Conservancy to determine whether the conservation values outlined in the conservation easement are intact. In addition, the visit is a fundamental part of relationship building between the Delaware Highlands Conservancy, its members, and landowners.*

Would you like to attend the property visit? ..... Yes No

Do you have plans to sell, subdivide or lease the property?..... Yes No

Have any structures (houses, sheds, barns, gazebos, garage, pole barn) been built or replaced within the boundaries of the conservation easement?..... Yes No

Has there been any land disturbance as a result of road/trail construction, digging/filling, planting, fencing or other construction?..... Yes No

In the last year, has the protected property been affected by any of the following:

Insect damage..... Yes No

Storm damage..... Yes No

Fire..... Yes No

Vandalism; trespassing, dumping, abusive use of ATVs or other vehicles.... Yes No

Property line violations from neighboring parcels..... Yes No

Has there been any timber harvesting on the property?..... Yes No

If so, was the harvest a result of a recommendation by a current Forest Management Plan?..... Yes No

Have you noticed any of the following affecting wetlands or waterways on the property?

Encroachment of invasive vegetation or animals..... Yes No

Change in flow, quality or quantity of water ..... Yes No

Livestock in or near waterways or wetlands..... Yes No

Erosion along banks or channels..... Yes No

Have you signed a lease for use of the land? (ie. gas lease, agricultural)..... Yes No

Have you noticed new populations or an increase in existing populations of invasive vegetation?..... Yes No

## Meet Your Stewardship Team

The Conservancy's Stewardship staff are here to help you. They will conduct an annual visit to your property and will assist you in finding answers to any questions you have about caring for your land or about your conservation easement. You may contact them anytime.



### Amanda Subjin, Conservation Programs Team Lead

Amanda is available to answer questions about the terms of your conservation easement. Please contact her before making changes to your land, or if you have sold or intend to sell your protected property.

amanda@delawarehighlands.org | 570-226-3164 ext. 2



### Cindy Taylor, Stewardship Associate

Cindy will conduct an annual monitoring visit to your property, where you will discuss how you are using your land and your plans for the future. She will answer your questions about your conservation easement and discuss how the choices you make in using your land can help continue your conservation efforts. Monitoring visits will begin in late spring.

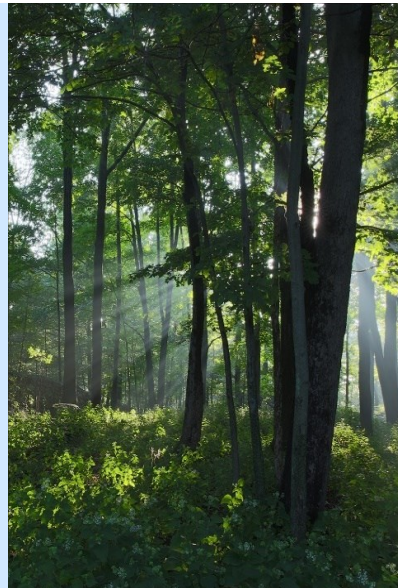
cindy@delawarehighlands.org | 570-226-3164 ext. 4

## MONEY DOES GROW ON TREES: Protecting Land, Planning for the Future

May 20, 10am-12pm,  
Grey Towers National Historic Site,  
Milford, PA

At this **free workshop**, learn from local financial and estate planning experts and Conservancy staff about your options for protecting and stewarding your cherished lands, planning for the future, and the possible financial benefits available to you. Get your questions answered and enjoy light morning refreshments and a catered lunch at the Finger Bowl at Grey Towers. Workshop attendees are also invited to a complimentary tour of the mansion after the workshop concludes. Registration is required.

Contact [info@delawarehighlands.org](mailto:info@delawarehighlands.org) or 570-226-3164 ext. 6 to register.



## Invasive Species Corner

### Autumn Olive (*Elaeagnus umbellata*)

Initially introduced in the 1800s, autumn olive has been used as an ornamental, for erosion control and wind breaks, and in food plots. These large shrubs can reach 20 feet in height and can be identified by alternate, oval-shaped leaves that are green on top and silvery-white underneath. In the spring, autumn olive blooms with fragrant small yellow or white flowers that turn into red berries by late summer and fall.

Autumn olive is commonly found in open areas, sparse woodlands, and disturbed sites, where they can shade out shorter, native plants. While their fruits provide a food source for birds, the berries are low in nutrients, and a greater variety of bird species are found in riparian areas dominated by native plants, when compared to areas dominated by invasive species.

For removal, autumn olive seedlings can be pulled by hand when soil is moist enough to extract the entire root. Larger individuals may be girdled or cut, followed by an herbicide application to prevent re-sprouting. Native alternatives to replace autumn olive include gray dogwood, silky dogwood, northern bayberry, arrowwood viburnum, fragrant sumac, and blackhaw.

Photos by James R. Allison, Georgia Department of Natural Resources, and Chris Evans, University of Illinois, Bugwood.org.



## Native Species Spotlight

### Northern Bayberry (*Myrica pensylvanica*)

Northern bayberry is a hardy, native alternative to autumn olive. Native to eastern North America, it is a medium-sized shrub, growing up to ten feet tall. Northern bayberry has dark, alternate, egg-shaped leaves and blooms small flowers in April. In autumn, its flowers turn into silver or white-gray berries that attract a variety of birds. It grows well in full sun to partial shade.

Northern bayberry is noted for its fragrance, salt spray tolerance, and adaptability to a variety of soil types. It functions well for privacy hedges and its salt tolerance makes it appropriate for erosion control along roadways. The silver berries serve as an attractive ornamental and food source during the winter.

Resources:

[http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr\\_010230.pdf](http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_010230.pdf)

<http://plantfacts.osu.edu/pdf/0247-768.pdf>



## What Does a Conservation District Do?

If you are interested in learning ways to sustainably use your property's natural resources, reaching out to your county Conservation District is a good place to start. There are approximately 3,000 Conservation Districts located across the United States, sometimes going by names such as resource conservation districts, natural resource districts, and land conservation committees. In the 1940s, Pennsylvania state law established Conservation Districts in PA, while New York state law established Soil and Water Conservation Districts in NY. Despite the variations in name, Conservation Districts are all founded with a similar goal: to create and promote natural resource management programs at the local level.

To achieve this goal, Conservation Districts partner with federal and state agencies, as well as private organizations, businesses, and industry partners to support local conservation efforts. The grassroots nature of Conservation Districts allows each one to tailor programs for the local community's needs. Support can be provided through technical assistance, information on best management practices, funding opportunities, and assistance with regulatory permits. Additionally, some Conservation Districts provide education programs on topics such as water management and soil erosion control.

Conservation Districts are a valuable resource for land management and there is one located in each county of the Delaware Highlands Conservancy's service region. To learn more about the overall impact of Conservation Districts, check out the National Association of Conservation Districts at <http://www.nacdnet.org/>, or our state programs: Pennsylvania Association of Conservation Districts, Inc. at <https://pacd.org/> and New York Association of Conservation Districts, Inc. at <http://nyacd.org/>.

### Find Your District

Wayne Conservation District	Pike County Conservation District	Sullivan County Soil and Water Conservation District	Delaware County Soil and Water Conservation District
Park Street Complex 648 Park Street Honesdale, PA 18431 (570) 253-0930 <a href="http://wayneconservation.org">wayneconservation.org</a>	556 Rt. 402, Suite 1 Hawley, PA 18428 (570) 226-8220 <a href="http://pikeconservation.org">pikeconservation.org</a>	64 Ferndale-Loomis Rd. Liberty, NY 12754 (845) 292-6552 <a href="http://sullivanswcd.org">sullivanswcd.org</a>	44 West Street, Suite 1 Walton, NY 13856 (607) 865-7161/7162 <a href="http://dcswwcd.org">dcswwcd.org</a>

### Welcome to the Community!

In December, we welcomed three new easement owners—with protected farmland, forests, and wetlands totaling more than 600 acres—to the Conservancy community. Read their stories at [www.DelawareHighlands.org/landowner\\_stories/](http://www.DelawareHighlands.org/landowner_stories/).

**If you are interested in inviting your neighbors to a discussion about protecting their land**, we are happy to give a presentation and meet with your group. Contact our Land Protection Coordinator Susan LaCroix at [susan@delawarehighlands.org](mailto:susan@delawarehighlands.org) or 570-226-3164 ext. 3, or plan to attend our event on **May 20, Money Does Grow on Trees** (details on page 6).



(Continued from page 1)

A biogeographic scan of Earth's principal habitats shows that a full representation of its ecosystems and the vast majority of its species can be saved within half the planet's surface. At one-half and above, life on Earth enters the safe zone. Within that half, more than 80 percent of the species would be stabilized.

There is a second, psychological argument for protecting half of Earth. Half-Earth is a goal—and people understand and appreciate goals. They need a victory, not just news that progress is being made. It is human nature to yearn for finality, something achieved by which their anxieties and fears are put to rest. We stay afraid if the enemy is still at the gate, if bankruptcy is still possible, if more cancer tests may yet prove positive. It is our nature to choose large goals that, while difficult, are potentially game changing and universal in benefit. To strive against odds on behalf of all of life would be humanity at its most noble.



Extinction events are not especially rare in geological time. They have occurred in randomly varying magnitude throughout the history of life. Those that are truly apocalyptic, however, have occurred at only about 100-million-year intervals. There have been five such peaks of destruction of which we have record, the latest being Chicxulub, the mega-asteroid that wiped out the dinosaurs. Earth required roughly 10 million years to recover from each mass extinction. The peak of destruction that humanity has initiated is often called the Sixth Extinction.



Biodiversity as a whole forms a shield protecting each of the species that together compose it, ourselves included. What will happen if, in addition to the species already extinguished by human activity, say, 10 percent of those remaining are taken away? Or 50 percent? Or 90 percent? As more species vanish or drop to near extinction, the rate of extinction of the survivors accelerates. In some cases the effect is felt almost immediately. When a century ago the American chestnut, once a dominant tree over much of eastern North America, was reduced to near extinction by an Asian fungal blight, seven moth species whose caterpillars depended on its vegetation vanished. As

extinction mounts, biodiversity reaches a tipping point at which the ecosystem collapses. Scientists have only begun to study under what conditions this catastrophe is most likely to occur.

Reprinted and edited for length from *The Sierra Club*, <http://www.sierraclub.org/sierra/2017-1-january-february/feature/biologists-manifesto-for-preserving-life-earth>. Complete article available online.