



Caring for Our Piece of the Earth

Session 3: Creating an Earth-friendly Yard

Compiled by Janet Allen

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Syracuse, NY

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Caring for Our Piece of the Earth

Creating an Earth-friendly Yard

Think of your garden not just as an extension of your house — a series of outdoor rooms, to use the current parlance — but as a habitat shared by you, plants, and the animals that depend on them for food and shelter.

~ William Cullina

Wildflowers: A Guide to Growing and Propagating Native Flowers of North America, p.1



About this session

In this session, we consider how we might change cultural norms about lawns and how we can solve the problems created by the conventional American landscape. And we offer some alternatives to conventional turf lawns.

We introduce the idea of thinking of the landscape as being composed of layers rather than as just a collection of plants.

We learn the basic habitat elements for wildlife: food, water, cover, and a place to raise young — in other words, the same things humans need! This will be further explored in Session 4.

We consider aesthetics, and how our ideas about what is beautiful might evolve.

Finally, we explore how management of our landscape can help protect climate.

REMINDER: You don't have to read or view everything, but please read the material flagged with 🍷. Material titled in **BLACK** is recommended; material titled in **GREY** is optional.

Opening

If your group chooses to have this role, the Opener starts the session with an opening, *not more than two or three minutes*, about their relationship to the natural world.

Circle question

Does social pressure affect how you landscape your front yard? Your back yard?

Reminder to the facilitator: The circle question should move quickly. Elicit an answer from each participant without questions or comments from others.



Create an earth-friendly landscape and you'll have interesting creatures such as this hummingbird clearwing moth visiting!

Discussion questions

1. Did one or two ideas from the articles or videos especially resonate with you? Briefly share why.
2. Kolbert notes that Rachel Carson and Lorri Otto believed that rather than showing that a homeowner cared about his neighbors, lawns showed that he didn't. Vanderkam calls it a "weird and antisocial thing." What do you think?
3. Have your ideas about hairstyles, clothing styles, music styles and the like changed over the years? What about your ideas about lawns and home landscapes?
4. Which vertical layers are most often missing from landscapes in your neighborhood? From your own landscape?
5. Do you find it hard to change your ideas about plants from being an ornamental feature of your home to plants being the foundation of our own life support system?
6. Do many people in your neighborhood have edible gardens? What challenges do people face in starting edible gardens in their home landscapes?
7. What did you find most interesting about the Tallamy / Darke Growing a Greener World video?

Putting it into practice

Here are some suggestions for putting into practice what you're learning.

- Find out what landscape layers are found in your ecoregion. For example, in the Northeast, tall canopy trees are an important layer, whereas this layer wouldn't exist in a desert. Think about how you can provide at least some of these layers in your own landscape.
- Provide the habitat elements and use sustainable landscape practices so you could be able to certify your yard as an NWF Certified Wildlife Habitat. (Some states, regions, and other organizations have other certifications as well.)
For NWF certification, see <http://www.nwf.org/Garden-For-Wildlife/Certify.aspx>
- Explore your current landscape with new eyes. Can you find beauty that has been there all along that you've overlooked? Are there elements that are merely "pretty" but that don't support life?
- Identify any dead or dying trees that could safely remain as snags, perhaps with some safety modifications.
- Explore some of the many citizen science projects in which you can participate in your own yard.

- Think about ways your current landscape and maintenance practices contribute to climate change. Choose some climate-friendly practices to implement.
- Replace at least some of your lawn with an edible garden of fruits and vegetables.



Instead of extra lawn, you can enjoy harvesting delicious, nutritious food in your own edible garden

*There can be no purpose
more enspiriting than
to begin the age
of restoration,
reweaving the wondrous
diversity of life
that still surrounds us.*

*~ E. O. Wilson
The Diversity of Life, 1992*

Beyond lawn

Small lawn areas can serve some purposes, such as providing a border, a small sitting or play area, or as a way to travel through our landscape.

But our yards can provide so much more!



A curving border of lawn helps tame the flower bed along the road.

Our gardens matter **by Doug Tallamy**

“Gardens and the greater landscape that surround them occupy such enormous areas of the country that they have great potential to address many of the environmental challenges facing us today if given half a chance. Gardens are made of plants and plants deliver, either directly or indirectly, many of the ecosystems services that support human populations.

Landscape designers, landscape architects, gardeners, and even homeowners who have no interest in gardening have within their power the ability to protect our watersheds, cool and clean the air we breathe, build and stabilize topsoil, moderate extreme weather, sequester carbon, and protect the biodiversity that drives ecosystem function.”

~ **THE LIVING LANDSCAPE, P. 110**

🌱 Turf war by Elizabeth Kolbert / New Yorker

Americans can't live without their lawns – but how long can they live with them?

Please read:

<http://www.newyorker.com/magazine/2008/07/21/turf-war-2>

Elizabeth Kolbert has been a staff writer at *The New Yorker* since 1999. She won the 2015 Pulitzer Prize for general nonfiction for *"The Sixth Extinction: An Unnatural History."*



This vast lawn affords its owners a clear view of ... a four-lane highway. Think what this land could become for both wildlife and people!

🌱 Flip the default by Doug Tallamy

"We have lawn, but only in the areas we typically walk. At our house, grass carpet is not the default landscape, something we do with the land when we don't know what else to do. Rather, it is a mechanism for formalizing plant communities and for guiding us through our dense plantings."

~ THE LIVING LANDSCAPE, P. 9



Must lawns be "weed"-free? Clover, for example, had long been a healthy nitrogen-fixing component of lawns -- until the introduction of weed-killers. These weed-killers happened to kill the clover along with other non-turf plants, which led to its demonization by companies that sold weed-killers.

The lawn as fashion by Laura Vanderkam

In this article, Vanderkam, a time management expert, suggests a way we can change our cultural obsession with lawns.

Please read:

<http://lauravanderkam.com/2010/08/out-of-fashion-green-lawns/>

What do lady's hats have in common with lawns?

Read on to find how this applies to our lawns.



*A woman wears a "Chanticleer" hat of bird feathers, circa 1912.
Photo: George Grantham Bain Collection/
Library of Congress*

Individuals CAN inspire change!

In the late 1800s, fashionable ladies wore hats adorned by feathers and even entire birds, the more exotic the better. This was a profitable business, but it was decimating entire bird populations.

Fortunately, people got together and worked hard to change this fashion.

"Hats off to the women who saved the birds" ~ NPR History

OPTIONAL to learn more about this history:

<http://www.npr.org/sections/npr-history-dept/2015/07/15/422860307/hats-off-to-women-who-saved-the-birds>

"How two women ended the deadly feather trade" ~ Smithsonian Magazine:

OPTIONAL additional information about this important effort:

<http://www.smithsonianmag.com/science-nature/how-two-women-ended-the-deadly-feather-trade-23187277/>

Your vision for your landscape

How would you like to make your yard more earth-friendly?

Some options

Here are some options to think about. You may want to start with the first option and move toward the third through the years.

- **Keep the lawn you have**, but change how you manage it. In other words, convert your conventional “Industrial Lawn” to what Bormann et al. call a “Freedom Lawn” (see next page).
- **Reduce the size** of your lawn and use the reclaimed area for native plants and/or an edible garden.
- **Eliminate the entire lawn** and replace with a diverse layer of native plantings and/or an edible garden or other landscape options. And, as Bormann et al. note, when building a new home, you have the opportunity to preserve all or part of the existing vegetation.

Organic lawn care

~ **Growing a Greener World (PBS) Episode 305**

You can maintain in a healthier way the lawn you do decide to retain.

OPTIONAL 28-minute video:

<http://www.growingagreenerworld.com/episode305/>



A mini-lawn, looking quite nice with no fertilizers, pesticides, or herbicides!

The freedom lawn

by F. Herbert Bormann, Diana Balmori, and Gordon T. Geballe

“Lawn, n., a stretch of grass-covered land, especially one closely mowed, as near a house or in a park.

Broadly interpreted, this definition does not prohibit the presence of other plants. In practice, it is easy to find mowed lawns that include many kinds of plants other than grass plants. ... All of these plants can coexist quite nicely with grasses considered to be the lawn grasses, such as bluegrass, ryegrass, and fescue. All of these potential inhabitants can tolerate mowing because they can keep sufficient energy-fixing apparatus below the level of the mowing blade. ...

We call this the ‘Freedom Lawn,’ for it permits all kinds of plants to exist in the only way they know how – by growing. The Freedom Lawn results from an interaction of naturally occurring processes and the selective effects of lawn mowing.

The Freedom Lawn is continually bombarded by seeds from nearby herbs, shrubs, and trees. Some of these may find an open space and germinate, producing a new plant that, if it can tolerate the whirring blade, will become part of the lawn. One of the most interesting things about the process of plant establishment is that it does not occur equally everywhere. In most lawns there are subtle variations ... These little variations in location alter the

conditions of growth and survival of plants; some plants are better adapted to particular conditions than others. ... Thus, the plant arrangement in the Freedom Lawn is well designed by the interaction between mowing and local ecology. The plants that do succeed here do so without artificial intervention and collectively produce a green cover that is adapted to the peculiarities of place. In other words, with relatively little effort it is possible to have a green lawn adapted to the site.”

~ REDESIGNING THE AMERICAN LAWN, P. 46-47

Smother your lawn

by Evelyn Hadden / Less Lawn

Hadden describes an easy way to eliminate lawn and some appealing ways to integrate the remaining landscape features.

OPTIONAL:

<http://lesslawn.com/articles/article1003.html>

She also describes many ways to shrink your lawn.

OPTIONAL:

<http://lesslawn.com/start.html>

Lawn alternatives

There are many alternatives to conventional turf grass lawns. Some might be suitable for your ecoregion.

Installing and Maintaining a Native Lawn by Jacob Johnston / Habitat Network

You can create a native lawn with short and slow growing native grass species that require less irrigation and are more likely to be resistant to weeds, pests, and fungus.

OPTIONAL:

<http://content.yardmap.org/learn/installing-maintaining-native-lawn/>

Groundcovers

Groundcovers are an obvious choice for replacing lawn. But they don't have to mimic lawn!

They don't have to be a low, uniform height.

They don't have to be something you can walk on.

They don't have to comprise only one type of plant.

They just have to cover the ground.

Non-native plants such as English ivy, vinca/periwinkle, liriop, bishop's weed and (non-native) pachysandra are commonly-used groundcovers. But native plants are better choices and are just as beautiful; choose them as often as possible.

My groundcovering journey by Janet Allen

OPTIONAL: (a PDF download)

<https://www.hgcny.org/docs/course/My-Groundcovering-Journey.pdf>



Even though this 'Gro-Low' sumac is about 18" tall, it makes an attractive groundcover in part of this front yard.



A mix of foliage plants can be attractive. This example includes Jacob's ladder, bloodroot, and columbine. If spring ephemerals are included, mix in ferns or other plants that remain green when ephemeral foliage dies back.

Native grass lawn

Here's a Native Lawn Demonstration at the Cornell Botanic Gardens showing native plants used to replace a conventional lawn:

<https://cornellbotanicgardens.org/explore/on-campus-natural-areas/native-lawn-demonstration-area/>

No-mow grass

Some native plant nurseries also sell seed for “no-mow” grass, although these aren't generally native grasses. One example (shown in the photo below) is from Prairie Nursery:

<https://www.prairienursery.com/resources-and-guides/no-mow-resources/>



The soft look of no-mow grass

Moss lawn

Unfortunately moss is too often seen as a problem instead of an opportunity for a beautiful alternative.

Moss makes a lush, no-care lawn by Jancee Dunn / New York Times

OPTIONAL:

<http://www.nytimes.com/2008/05/01/garden/01moss.html>

Moss gardens

~ Growing a Greener World PBS Series Episode 319

OPTIONAL 18-minute video

<http://www.growingagreenerworld.com/episode319/>



We readily appreciate the beauty of moss in the wild. Why not bring its beauty home?

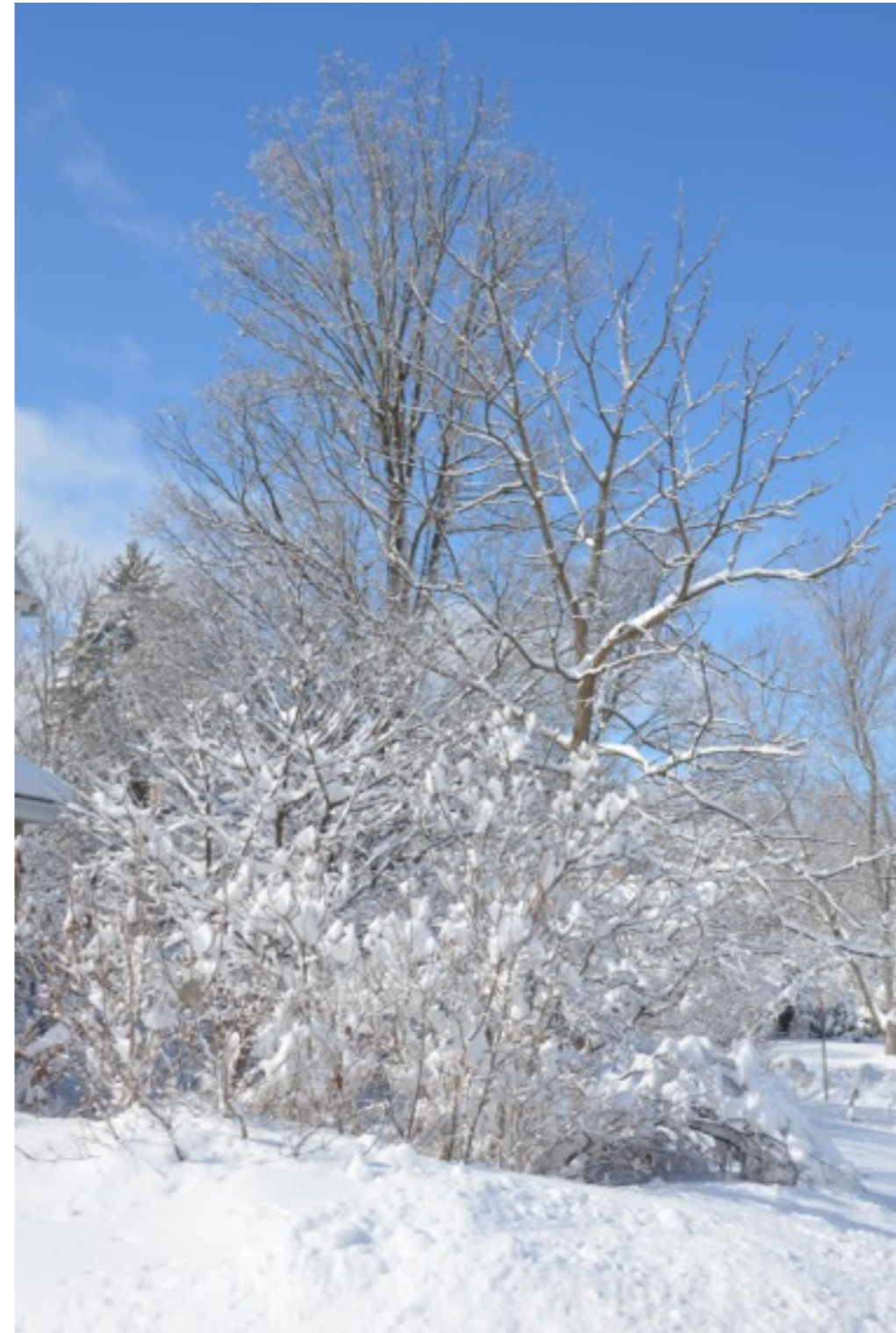
🌿 Layers in the landscape by Rick Darke and Doug Tallamy

“A bird’s-eye view of typical urban and suburban landscapes reveals that they lack many of the living layers characteristic of broadly functional ecosystems. In addition, many of the layers that are present have been stripped of much of their complexity, and because of this, the biological diversity and ecological functions of these landscapes are greatly diminished.

Since we spend so much of our time in such landscapes, it’s easy to adjust to their simplicity and unconsciously to accept it as the norm. However, if our intent is to create beautiful, livable landscapes that are also highly functional in environmental terms, integrating meaningfully detailed layers has to be a primary design goal.

Many suburban residential landscapes already include a few or many of the literal layers that have made traditional habitats and other long-evolved ecosystems so full of life. Existing layers can be enhanced and missing layers can be appropriately created. The key is to develop a familiarity with the basic functions, inter-relationships and living dynamics of layered landscapes, and then to use horticultural skills to reprise and maintain them. Learning to read and draw lessons from the structure, composition, and processes of functional ecosystems will be increasingly essential to good gardening and the making of broadly functional landscapes for life.”

~ **THE LIVING LANDSCAPE, PP. 12-13**



Most of this landscape's layers are easy to see in winter: canopy trees, understory trees, shrubs, and — peaking out under the snow occasionally — the herbaceous plants. Autumn’s fallen leaves cover the ground under the entire landscape.

Habitat for wildlife

When you reduce the size of the lawn, you have more space for creating habitat for wildlife ... and for people, too.

Welcoming wildlife into the garden with native plants by Doug Tallamy / Wild Ones

“Landscape plants are more than decorations! Used properly, they clean and store water, filter air pollutants, reduce heating and cooling bills, sequester carbon dioxide, prevent floods, and maintain food webs; that is, they deliver ecosystem services that are essential to human well-being. ... we need to rebuild functioning ecosystems right in our yards ... everywhere. And we can do this only with plants.”

(Currently unavailable) EXCELLENT article!

Please read (in the ‘Why Native Landscapes’ section on the following webpage):

<https://www.wildones.org/wp-content/uploads/2011/12/WelcomingWildlife.pdf>

Do we forget? by Janet Allen

When our grandson was young, I mentioned in passing that he was an animal. He thought this was a very funny joke! “So you’re a plant or a mineral,” I replied, “or maybe a fungus?”

As adults, we might think this is just one of those cute things kids say.

But think about it. Are we treating our yards (and the earth) in a way that acknowledges that we are indeed animals that require — indeed are utterly dependent on — a healthy habitat?

As it happens, we need the same things wildlife needs: food, water, cover/shelter, and a place to raise our young, all present in a poison-free, healthy yard — and planet.



“But Grandma, I’m not an animal!”

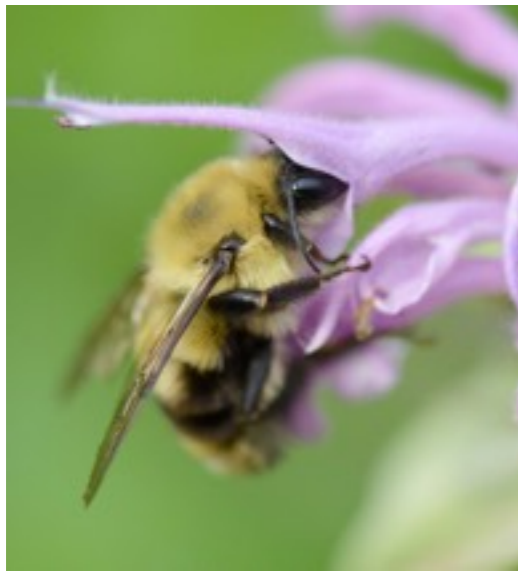
What is habitat?

~ National Wildlife Federation

This brief overview of habitat elements describes all you need to be able to certify your yard as a Certified Wildlife Habitat.

Please read about the four topics below on this webpage:

<https://www.nwf.org/Garden-For-Wildlife.aspx>



Food



Water



Cover



A place to raise young

🌱 Bringing nature home by Growing a Greener World

Please view Episode 620 of the PBS series *Growing a Greener World* featuring Doug Tallamy and Rick Darke in their home landscapes. An excellent interview and a chance to see a bit of the landscapes described in their book.

Please watch this 25-min. video:

<http://www.growingagreenerworld.com/bringing-nature-home/>



This video shows some of the authors' living landscapes, and the book itself has lots of photos that can help guide your plans for your own landscape. Both video and book are highly recommended!

Just gardening? by Janet Allen

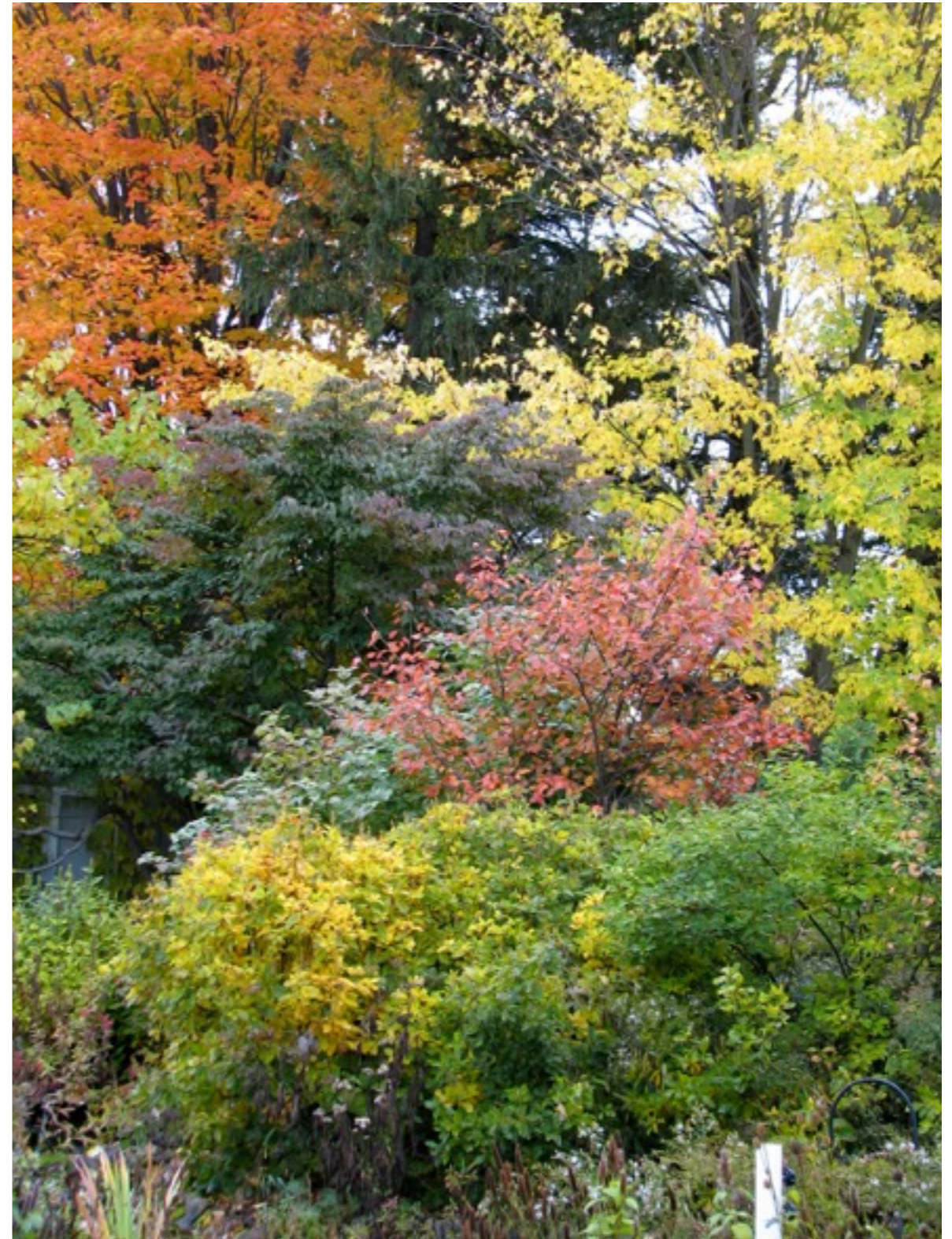
An important difference between creating a living landscape and just gardening is providing a diversity of layers rather than showcasing individual plants.

For example, in this part of our home landscape in the Northeast, single plants are not featured, but rather are part of a whole three-dimensional, diverse habitat full of native plants.

Sugar maples are part of the canopy layer; serviceberries are part of the understory tree layer; summersweet, winterberries, and New Jersey tea are part of the shrub layer; chelone, cardinal lobelia, asters, and grasses are part of the herbaceous layer; and leaf litter from all of these plants remains on the ground, continuously building healthy soil that itself is full of life.

This landscape provides food through the seasons: nectar for pollinators, seeds and berries for birds, and leaf litter for birds to seek out insects. It provides cover for birds, amphibians, and insects. It provides places for birds to raise their young as well as nesting materials. It provides host plants for butterflies and moths, resulting in caterpillars – more bird food – and creates a safe place for them to overwinter. And this tree and shrub border is next to our pond and stream, providing even more habitat.

It's an ever-changing, colorful landscape and is an enjoyable place for people, too.



This diverse, three-dimensional landscape grows and changes throughout the seasons and throughout the years.

Not all natives are equal

Some native plants support more life than others.

The list at the National Wildlife Federation's *Native Plant Finder* website (below) shows the number of moth and butterfly species (i.e. "lepidoptera") various plants support.

For example, a native oak supports 532 species of lepidoptera, but the native Kentucky coffee tree supports only 5.

Some native plants, such as maidenhair fern, support no insects. This means no moth or butterfly uses this plant to raise their young, though it doesn't mean it's a worthless plant.

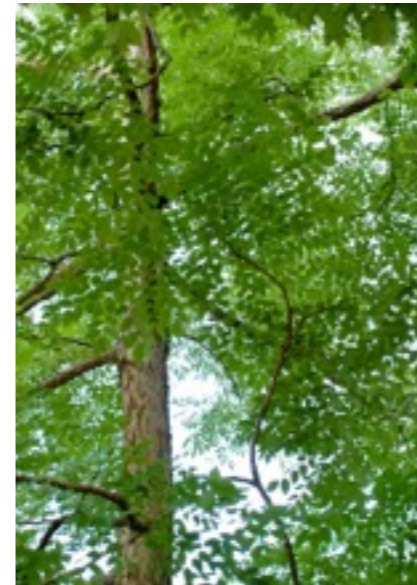
It's very important to plant many "biodiversity all-stars" natives, such as oaks and cherries, but you can also include a variety of other native plants that are part of the local ecosystem.

For example, pussytoes (*Antennaria*) may support only 6 species of Lepidoptera, but for those 6 species, it's a very important plant!

The moral: Plant natives, especially the biodiversity all-stars. But also work toward recreating the natural plant community that belongs in your region with all of its own wonderful plant diversity.

OPTIONAL: Native Plant Finder for your area developed by Doug Tallamy and sponsored by National Wildlife Federation:

<https://www.nwf.org/NativePlantFinder/>



Kentucky coffee tree is native, but supports relatively few lepidoptera.



Red oak is one of many native oaks -- "biodiversity all-stars." You can find a species of oak native to almost anywhere.



An American Lady butterfly laying eggs on pussytoes, one of its host plants

Aesthetics: Pretty is as pretty does

Some of us remember our grandparents reminding us that “pretty is as pretty does,” usually when we were focusing more on our appearance than on being a good person.

“Pretty is as pretty does” is also how we can think about our landscapes. Can we create beautiful landscapes we (and our neighbors) can enjoy without compromising healthy ecosystems? And just what is a beautiful landscape anyway?



The malodorous callery pears (aka Bradford pear) were planted because of their “pretty” flowers, but they provide little habitat and are also invasive.

*Our ability to perceive quality
in nature begins,
as in art,
with the pretty.*

*It expands through
successive stages
of the beautiful
to values
as yet uncaptured
by language.*

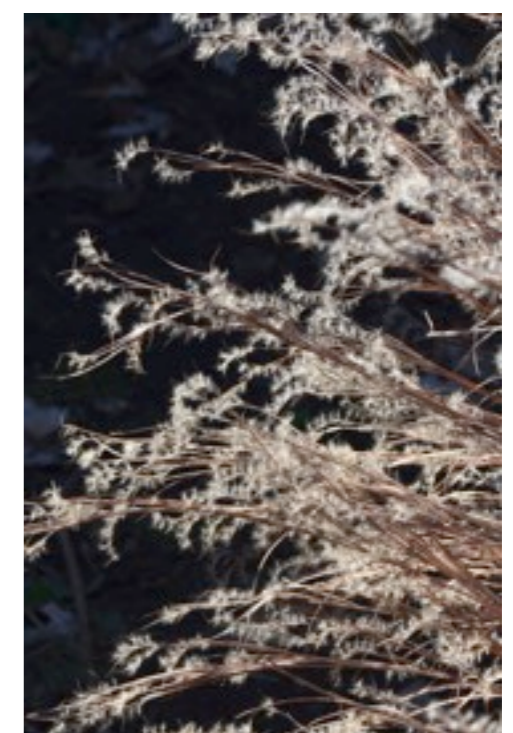
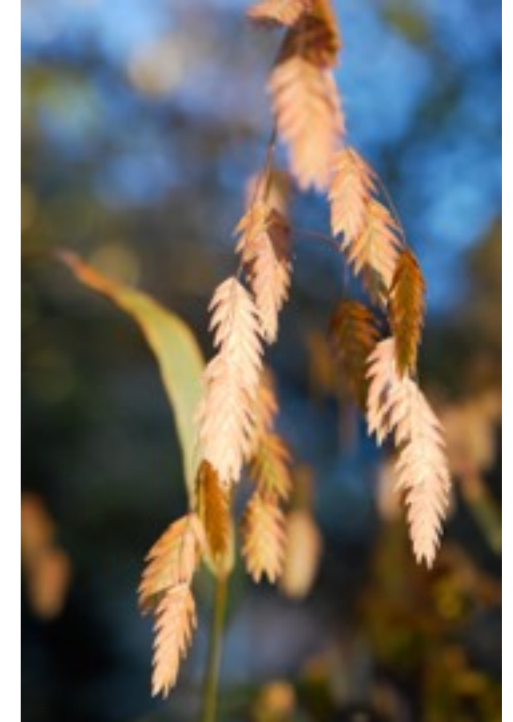
~ Aldo Leopold

Earth tones: Beyond a landscape of merely “pretty” flowers by Janet Allen

“Earth tones” are popular for interior decorating. Let’s appreciate the beauty of actual earth tones in our landscapes, too. There’s beauty underfoot if we stop to look.



And instead of deadheading or “fall cleanup,” enjoy the beauty of seedheads while preserving a valuable winter food source for birds. And these seeds are the source of additional plants to fill our landscapes.



Deceptive beauty by Doug Tallamy

NOTE: This article originally appeared in the magazine *Wild Seed*.

“When I was 4, my family lived next to a lady who split her affections between her husband and her roses. I suspect her husband got the short end of that split because our neighbor really loved her roses. I was told they were ‘prize’ roses, whatever that meant, and they lined all sides of her front yard in beds two bushes deep. I loved to feel their soft petals and smell their intoxicating fragrance, and I was utterly enchanted by their beauty; so much so that one sunny morning when the roses were in full splendor, I decided I would make a rose petal collection which I could then take with me in my little red wagon wherever I went. My goodness that was fun! Each petal I picked and carefully arranged in my wagon seemed more beautiful than the last, and so I kept picking them, and picking them. I was tireless; entirely committed to my obsession, and in no time I had picked every last



WINTER: A mockingbird protecting its winterberries.

petal off my neighbor’s ‘prize’ roses. My wagon was piled high with rose petals, and I could not have been more pleased with my collection.

At some point that morning I pulled my wagon and its cargo around to our back yard and was suddenly confronted by mother and my neighbor whose face was redder than I had



SPRING: At the end of winter when food is scarce, a robin is seeking out the remaining winterberries.

remembered it. My mother stared down at me, arms folded, and in her sternest of voices asked ‘Did you pick those petals off of Mrs. Neighbor’s bushes?’ Uh oh! Quick as lightning I sensed all was not well. I hesitated, turned and looked at my wagon treasure and ... for some reason my memory of that day some 60 years ago stops right at that point.

I don’t know if I was man enough to confess my crimes, or if I just played dumb, which has always come very naturally to me. But I also have memories of kindergarten the following year so I apparently survived the incident. My point in revisiting this

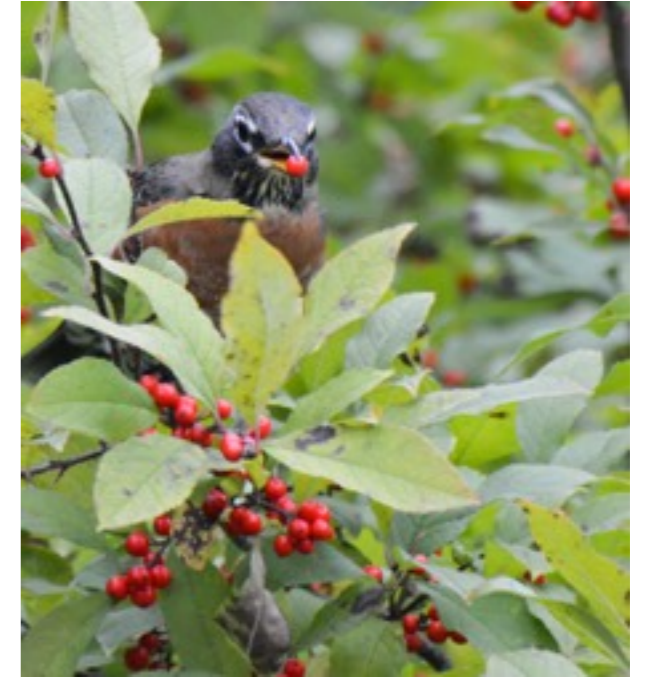
memory is that beauty can easily be captivating, and sometimes, when it's all we see, beauty can lead us to unwise decisions.

This was certainly the case with my neighbor's roses but I believe beauty has also shaped our relationship with all landscape plants. Worldwide, there are so many plants with stunning color and habit that their beauty has indeed overpowered ecological logic. We have come to view plants only as sources of entertainment, and, as we so often do with other objects of beauty, we have attached status to their ownership. We have created multibillion dollar industries to facilitate the acquisition of exotic plants and now, if you have not replaced the native plant communities that once occupied your yard with plants from Asia, you are the cultural odd ball, something most people work hard to avoid.



SUMMER: Though the winterberry shrub's flowers are small, they provide a lot of nectar for pollinators.

Why does it matter that most U.S. neighborhoods now look like landscapes from the suburbs of Beijing? Well, if plants truly were here only to entertain us, it would not matter at all. But we are learning that our obsession with plant beauty has blinded us to understanding the critical ecological roles plants play within the ecosystems we rely on. Plants do many things, but chief among them is their ability to capture energy from the sun and pass it on to all other organisms. And this is where plants differ greatly from each other; some plants pass their energy to animals much better than other plants, and they do it through highly specialized relationships with those animals that have developed over eons. The key, of course, is that plants indigenous to an area (native species) have been able to form these relationships with local animals whereas plants from elsewhere (non-native species) have not. Dismantling the specialized relationships in our landscapes by using non-native ornamentals has been a serious mistake, for it is these relationships that are the essential backbone of the natural world that supports us.



FALL: Shortly after they ripen, the berries already are feeding birds.

[This issue of Wild Seed] celebrates four relationships that many of us could re-establish in our yards: the relationship between robins and winterberries, between woodcocks and alders, between the eastern cottontail and Spirea alba, and between poplars and grouse. But as you read about these relationships, be aware that each of these native plants support dozens, sometimes hundreds of other relationships as well. The winterberries that help robins make it through the winter with their berries also provide attractive flowers in early summer for tiny native pollinators and food during the summer for moths like Harris's Three Spot. Alders and poplars not only respectively produce cover for foraging woodcocks and catkins for grouse, but they also serve as host plants for hundreds of caterpillar species that, in turn, nourish the chicks of dozens of species of warblers, vireos, tanagers, buntings, and thrushes. And Spirea not only provides winter twigs for cottontails but also summer pollen and nectar of many native bees and butterflies. Every plant is an important cog in the wheel of the life around us and the better we understand how that wheel works, the better we will be able to sustain it."



Food for cardinals, too

Have we so internalized the message of advertisers that we cannot see the downside of products sold purely on their persistent ability to kill—be it insects, weeds, snails, or slugs?

Have we become so divorced from nature that we can enjoy only flowers and plants with nearly air-brushed perfection, impregnated with toxins that kill anything that threatens their flawless appearance?

*~ Mark Richardson,
Former Director of Horticulture,
New England Wild Flower Society*

(now known as Native Plant Trust)

Yogurt's Lessons

By Janet Allen

NOTE: This article originally appeared in the Wild Ones Journal

Back in the late 20th century, Americans discovered yogurt and its health benefits. But it was a bit too tart for the American palate. The solution? Add sugars and flavorings. Manufacturers added not just fruit, but jam; not just a sprinkling of nuts, but bits of candy; not just flavors from real food, but artificial flavorings and unnatural colors.

Today, grocery stores devote a whole wall of the dairy section to the many varieties of sweetened yogurt. Want just plain yogurt? It's there, but you'll have to search for it.

We've turned what had been an ancient, health-sustaining food into just another unhealthy dessert. Yet it's a dessert we feel virtuous in eating. After all, it's yogurt, right?

But why am I writing about food in a plant journal?

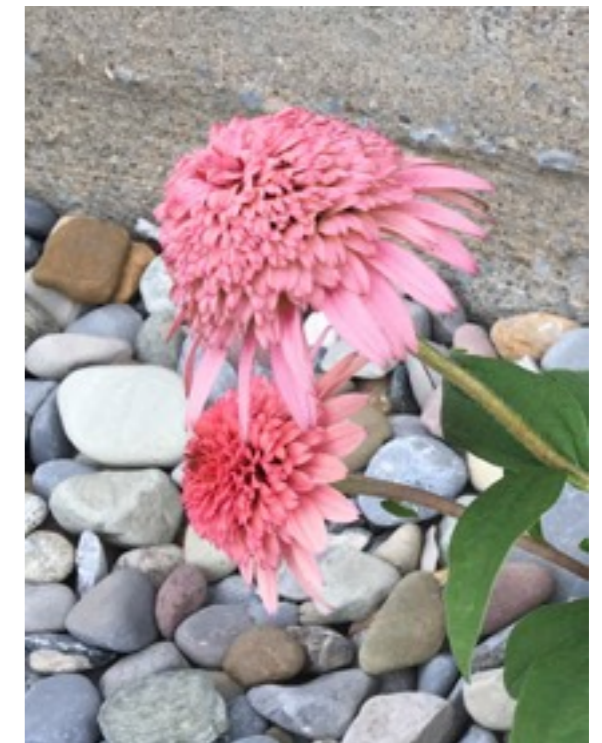


These coneflower cultivars show just two of the more than 100 colors created

Because we're doing to plants what we've done to yogurt and other foods. We're taking life-sustaining "plain" plants — our native species — and "sweetening" them beyond recognition. Novelty-seeking humans like lots of extra petals, unnaturally garish colors, fewer "messy" berries. Industrial horticulture has flooded conventional nurseries with these profitable creations.

We know that excess sugar doesn't support human health, and we're now finding that many cultivars of native plants — known as "nativars" — don't provide healthy food for wildlife or the benefits of genetic diversity.

Does it matter that a plant is technically native if it has so many petals a bee can't reach the nectar? That its nectar guides — invisible to people, but essential cues for pollinators — have disappeared in our race to create novel colors? That flowers haven't produced seeds birds need in fall and winter?



A cultivar of purple coneflower

But as with eating yogurt, we have a virtuous feeling when we plant a nativar. After all, it's native, right?

People who have chosen to eat unprocessed foods have been rewarded with better health. Many even discover that their taste buds adapt and formerly favorite foods now taste sickeningly sweet. Our reeducated taste buds can actually enjoy the clean taste of simple yogurt, a piece of fresh fruit, a simple vegetable dish.

We can similarly rethink our choice of planting natives. Sure, just as occasionally indulging in a dessert-y yogurt won't destroy our health, planting an occasional native (especially one similar to the species) won't destroy all the benefits of a natural landscape. But we can reeducate our horticultural "taste buds" and come to appreciate the simple elegance of the species, the variations we see in plants when they reseed, the charm of subtler colors.

Even more, we can revel in the life native species support. We can enjoy watching a bee zeroing in on a nectar-rich flower or a bird devouring nutritious seeds left to overwinter on spent stalks. We can hope that some of the genetically-varied seedlings our species produce will be able to adapt to a changing climate or survive attacks by exotic pests and diseases.

In an increasingly industrialized society and threatened environment, we can know that we're doing one of the most important things an individual can do to support life on earth: planting native species.



Just "plain" purple coneflower (Echinacea purpurea) is not only attractive to people, but provides nectar and seeds for wildlife.

Protecting the climate



Climate change will increasingly affect plants, animals, and ecosystems – and therefore, people, too.

Besides taking action as citizens, we must care for our own piece of the earth in a climate-friendly way.

The climate-friendly gardener ~ Union of Concerned Scientists

Although national and global policies will be needed to tackle climate change, we can do a lot in our own yards to combat global warming from the ground up.

Please read this article:

http://www.ucsusa.org/food_and_agriculture/what_you_can_do/the-climate-friendly-gardener.html

OPTIONAL: This PDF elaborates on the article:

http://www.ucsusa.org/assets/documents/food_and_agriculture/climate-friendly-gardener.pdf

Use vegetation to increase energy efficiency ~ Landscape for Life

An energy-conserving landscape utilizes trees, shrubs, groundcovers and vines to provide cooling summer shade as well as insulation against heat loss in winter. It also serves aesthetic purposes.

Please read:

<https://landscapeforlife.org/plants/use-vegetation-to-increase-energy-efficiency/>

Landscaping for energy-efficient homes ~ Energy.gov

Not only can your landscaping choices save energy (and money), but they can also make your home more comfortable. And, of course, using less fossil fuel helps prevent climate change.

OPTIONAL:

<https://www.energy.gov/energysaver/design/landscaping-energy-efficient-homes>



Before planting this tall red maple on the south side of the house, the porch (behind the tree) was unbearably hot in summer. This tree also shades the whole house air conditioner unit next to the porch. The maple is a deciduous tree, so in the winter it allows sun to enter the windows.

Climate-wise Landscaping: Practical Actions for a Sustainable Future by Sue Reed and Ginny Stibolt

An excerpt from the Reed and Stibolt book summarizes the actions we can take in our own gardens and why they matter.

Please read this excerpt:

<https://www.ecolandscaping.org/05/climate-change/climate-wise-landscaping/>

If you want to learn more, read their whole book

Climate-Wise Landscaping: Practical Actions for a Sustainable Future

by Sue Reed and Ginny Stibolt



RECOMMENDED!

🌱 The real dirt on peat moss by Ken Druse

As Druse says, *"The biggest problem with peat moss is that it's environmentally bankrupt."*

Please read:

<http://gardenrant.com/2009/04/ken-druse-dishes-the-dirt-about-peat-moss.html>



Leaf humus is a good alternative to peat moss.

An edible garden is a good use of your land

Food is a habitat requirement for wildlife, and people also need food. Not only can an edible garden replace lawn, but it can provide at least some of your food, and it will be the freshest food possible, grown in the way you want.

It also cuts the fossil-fueled transportation of food from thousands of miles to just a few footsteps from your house. Growing at least some of your own food may save some natural areas from being converted to farmland.

Just as important, knowing how to grow food helps create a resilient foodshed for your part of the country. During WWII, **about a third** of the vegetables produced in the U.S. came from Victory Gardens.

We can do it again! As the poster says, “*Your Victory Garden counts more than ever!*”



A World War II poster

One Yard Revolution: Frugal and sustainable organic gardening

This Chicago gardener has a very productive garden in a small space and shows you how you can have one, too. He does indeed emphasize “frugal,” “sustainable,” and “organic.”

Excellent series!

OPTIONAL videos:

<https://www.youtube.com/user/OneYardRevolution!>



A habitat garden with its abundant pollinator population is a good companion to an edible garden.

Edible Estates by Fritz Haeg

Haeg pioneered the idea of creating beautiful edible gardens in the front yard.

OPTIONAL:

<http://www.fritzhaeg.com/garden/initiatives/edibleestates/main.html>

(NOTE: You can click on the photos at the top of the webpage to see details of the gardens he helped create and inspire.)



It's easy to grow a variety of healthy produce right in your own yard

Lawns are for suckers. Plant a garden — for the climate! by Nathanael Johnson

This brief article describes research that shows that two pounds of carbon emissions could be prevented for every pound of homegrown vegetables consumed. Having a compost pile is especially important in achieving this goal.

OPTIONAL:

<http://grist.org/food/lawns-are-for-suckers-plant-a-garden-for-the-climate/>



Over the decades, this three-bin homemade composter has produced thousands of pounds of compost for the edible garden.

Make room for solar

Leave room in your landscape for a “solar clothes dryer.” Why use fossil fuel for a task the sun and wind do even better for free?

An unexpected pleasure

by Janet Allen

Is my time too valuable to waste hanging laundry?

OPTIONAL:

<https://www.hgcny.org/docs/course/An-Unexpected-Pleasure.pdf>



A simple rotary clothes dryer takes little space in the yard

Climate-related citizen science project

Citizens can help scientists learn more about how climate affects plants and animals. Here’s a project you can participate in:

Project BudBurst: People watching plants contributing to research



Every plant tells a story about changing climates.

You can monitor as many or as few plants as you’d like as many or as few times as you’re able. *Educational materials are available for every grade level from Kindergarten through college.*



OPTIONAL - Information on participating is at:

<http://budburst.org/>

These are examples of two phenophases of plants: a red oak bud ready to “burst” and the final stage of a trillium

*Mother Nature is just
chemistry, biology and physics.*

That's all she is.

You cannot sweet-talk her.

You cannot spin her.

*You cannot tell her that
the oil companies say
climate change is a hoax.*

*No, Mother Nature is
going to do whatever
chemistry, biology and
physics dictate.*

***Mother nature always bats last,
and she always bats 1,000.***

*~ Robert K. Watson,
founder of the LEED
Green Building Rating System*

One step at a time

Creating an earth-friendly landscape may seem complicated at first – perhaps even overwhelming – but it doesn't have to be done all at once.

Just reduce some lawn, take good care of the soil, and keep planting those native plants! Every change you make in this direction will benefit life on earth.



Take it one step at a time



Drawing a map of your yard to scale is helpful in planning your landscape. It doesn't have to be fancy!

Note where your yard is sunny, shady, or in between at various seasons; also whether it's moist, dry, or in between. Check your soil's pH (acid to alkaline). It's not necessary to change the pH – just choose plants that will grow in the soil you have.

Becoming an ecological gardener by Kim Eierman / EcoBeneficial

We've mentioned the ideas contained in the following article from *Connecticut Gardener* throughout our discussions, but this article is an excellent summary of 21 principles you can follow to transform your yard to a healthier ecosystem.

OPTIONAL:

http://www.ecobeneficial.com/recent_articles/

(NOTE: "Becoming an ecological gardener" is one of the many articles on this website. You can search on the title or scroll through the pages to find it.)

Good advice from NC State's "Going Native"

Remain patient when establishing a new native plant landscape. It generally takes 3 to 5 years before the results of landscaping efforts pay off and wildlife use of native plants becomes obvious. An old adage says, 'The first year a garden sleeps, the second year it creeps, and the third year it leaps.'

From: <https://www.ncsu.edu/goingnative/howto/index.html>



Plants grow and change through the seasons and through the years. The plant composition of this area continues to change. Just keep planting native plants, see how it evolves, and edit as needed.



Consider mature size and growth habit of plants!

~ Janet Allen

For small- to mid-size yards:

Research the plant and considered its predicted mature height and width. Plant growth varies somewhat depending on the exact conditions, but if a plant is listed as being 8 feet tall and 6 feet wide, perhaps that spot right next to the path won't seem so great in ten years. And we do want to plant for the long term. Place the plant where it can become its true size without having to prune it back all the time.



These formerly small shrubs were planted too close to the path and sidewalk. When they reached mature size they had to be removed.

For large yards or acreage:

For large areas, native plants that spread could be your ally. The Wildflower Center explains how they could be “just the thicket”:

OPTIONAL:

<https://www.wildflower.org/read/native-plants/just-the-thicket>

Going Native: Urban Landscaping for Wildlife with Native Plants

~ NC State

How to create your own native landscape. **Note:** NC State developed this material, so specific native plant recommendations apply to North Carolina.

But the general recommendations for creating an earth-friendly yard apply anywhere and are helpful to anyone thinking about how to design their yard:

- 1) Identify wildlife needs (more details in Session 4)
- 2) Map existing site and vegetation
- 3) Design a native plant landscape
- 4) Implement a native plant landscape

<https://www.ncsu.edu/goingnative/howto/index.html>

More resources

Energy-wise landscape design: A new approach for your home and garden

by Susan Reed

“Residential consumption represents nearly one quarter of North America’s total energy use, and the average homeowner spends thousands of dollars a year on power bills. This book presents hundreds of practical ways everyone can save money, time and effort while making their landscapes more environmentally healthy and energy efficient.”

Climate-wise Landscaping: Practical Actions for a Sustainable Future

by Susan Reed and Ginny Stiboldt

Excellent! Lots of well-organized information to help create a climate-friendly landscape.



TED Talk: How to grow a forest in your backyard

by Shubendu Sharma

“Forests don't have to be far-flung nature reserves, isolated from human life. Instead, we can grow them right where we are — even in cities. Shubendu Sharma grows ultra-dense, biodiverse mini-forests of native species in urban areas by engineering soil, microbes and biomass to kickstart natural growth processes. He describes how to grow a 100-year-old forest in just 10 years.”

OPTIONAL: This 9-minute video is at:

http://www.ted.com/talks/shubendu_sharma_how_to_grow_a_forest_in_your_backyard

The Woods in Your Backyard: Learning to create and enhance natural areas around your home

by Jonathan Kays et al.

If you have a few acres of land, this can be very helpful.

OPTIONAL: Download this PDF file at

http://host31.spidergraphics.com/nra/doc/Fair%20Use%20Web%20PDFs/NRAES-184_Web.pdf

See a short video introduction to this material and learn more about it from the University of Maryland Extension:

<https://extension.umd.edu/woodland/woods-your-backyard>

Gathering Moss: A Natural and Cultural History of Mosses

by Robin Wall Kimmerer

OPTIONAL:

This book is “a beautifully written mix of science and personal reflection that invites readers to explore and learn from the elegantly simple lives of mosses.”

~ Amazon review



Free posters like this one are available at

<https://xerces.org/2017/10/06/leave-the-leaves/>