Caring for Our Piece of the Earth

Session 5: Our Landscapes, Ourselves, and the World Beyond

Compiled by Janet Allen

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Caring for Our Piece of the Earth

Our Landscapes, Ourselves, and the World Beyond

We may differ about whether the universe was made by fiat, or by the laws of nature, but on this point we are in profound accord: the Earth —with its gorgeous diversity of habitats and beings—belongs, if it belongs to any of us, to our children and their children and on into the distant future. It is not ours to squander.

~ Carl Sagan

About this session

In this session, we explore how we can further transform our focus on ornamental landscapes to an appreciation of landscapes that sustain life.

We examine the relationship between our yards and our connection with nature, including the benefits of nature for our health.

We learn how to make our yards acceptable — even appealing! — to the surrounding neighborhood and community.

We consider how change happens, both for individuals and for society.

Finally, we explore how to extend the stewardship of our own yards to our communities and to the world beyond.

Pre-meeting activity: Experience nature in your yard 2.0

At the beginning of this course, our "homework" was to spend a few minutes in our yard (perhaps 10 minutes? 30 minutes?) and just OBSERVE.

Let's try this again. You may not have had an opportunity yet to make many changes in your yard, but perhaps you've begun to see your landscape with new eyes.

- How do you feel after this opportunity to enjoy being out in your yard?
- How was this experience different from your Session 1 experience? Are you noticing different things? Making different plans for change than you thought about last time?

NOTE: If the season or weather doesn't permit being outdoors, sit by a window to observe.

We'll share our observations when we meet.

Opening

If your group chooses to include 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

Share a memory of a natural area that was important to you as a child. As far as you know, is it still there?

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

Discussion questions

- 1. Activity: Share your "Experience with nature in your yard 2.0."
- 2. Did one or two ideas from the articles or videos especially resonate with you? Briefly share why.
- 3. In what ways do you connect with nature in your yard? What further connections do you hope to forge as you continue creating your earth-friendly landscape?
- 4. How many of the myths did you believe before reading Oder's article?
- 5. Which of the tips for making your natural landscape more appealing to neighbors would work in your yard?
- 6. What do you consider our responsibility to future generations — our grandchildren and beyond — as well as to future generations of wildlife?
- 7. Are there any areas in your neighborhood or community that fit into a mosaic such as Stein describes?
- 8. What potential for corridors and urban biodiversity exists in your region?
- 9. Can you think of people who fall into the categories described in the "Diffusion of Innovation" with respect to landscaping?

Putting it into practice

Here are some suggestions for putting what you've learned into practice in the coming days, weeks, months, and years.

- Explore citizen science projects to find one that fits your interests and other constraints.
- Spread the word by displaying one or more yard signs about being pesticide-free, a pollinator habitat, a monarch waystation, or the like.
- Spend some time in nature with a child.
- Keep a nature journal noting when certain events happen, such as the date toads first sing in spring.
- Resolve to spend some time to just sit and experience nature in your yard or in another natural setting — perhaps daily, perhaps weekly.
- Join a community group that is working to incorporate nature in our communities — perhaps a community tree committee, a project to support pollinators or butterflies, planting native plants in public areas, for example.
- Support, promote, and participate in nature centers, land trusts, or other natural areas in your community.



Just as wildlife evolved with native plants, humans evolved being out in nature.

Reconnecting to nature

Your earth-friendly landscape provides habitat both for wildlife and for people. It's also a powerful way to reconnect with nature.

Being able to experience nature every time you look out the window or walk out into your yard can enrich your life in countless ways.



Enjoying a morning cup of Bird Friendly Habitat coffee – and nature

W Not only missing but forgotten by Sara Stein

"I'm lucky to have spent my childhood summers among woods, streams, meadows, and marshes, but most suburbanites have never searched for frogs' eggs, caught fireflies in a jar, or peeked into a grassy nest of adorable baby mice.

As the years pass, fewer and fewer people will long for the call of bullfrogs.

Today's children, growing up on lawns and pavements, will not even have nostalgia to guide them, and soon the animals will be not only missing but forgotten."

~ NOAH'S GARDEN P.11

If a child is to keep alive his inborn sense of wonder, he needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement and mystery of the world we live in.

> ~ Rachel Carson, Silent Spring

Why we must reconnect with nature by Renee Cho / Columbia University Earth Institute

We need to broaden our definition of nature and bring nature back to the cities, farms, yards, and elsewhere.

Please read:

http://blogs.ei.columbia.edu/2011/05/26/why-we-must-reconnect-with-nature/

V Finding true value in nature's riches by Roger Cohn / Yale Environment 360

Journalist Michael McCarthy has chronicled the loss of wildlife in his native Britain and globally. In an interview with Yale Environment 360, he talks about why he believes a new defense of the natural world is needed – one based on the joy and spiritual connection it provides for humans.

Please read:

http://e360.yale.edu/features/ the_moth_snowstorm_species_loss_michael_mccarthy

Is nature expendable?

Like all of life, nature has risks and dangers. Often these seem to be dangers people are unwilling to accept, unlike other common human-created dangers, such as

- car accidents (in 2015, 38,300 killed, 4.4 million injured);
- hospital errors (the third leading cause of death in the U.S.);
- household products (often shown to be hazardous or carcinogenic): non-stick coatings on pans, fabric coatings, triclosan, air fresheners, a few examples among many;
- personal care products (including ingredients used in U.S. products but which are banned as unsafe in other countries);
- lawn and garden pesticides.

Nature seems to be the only area where risk — even mere inconvenience — isn't tolerated. Bees might sting? Kill them with pesticide. A healthy tree might theoretically fall on a house? Cut it to the ground preemptively just in case. Dandelions marring the perfect green carpet of lawn? Spray them with herbicides.

Is this difference in risk tolerance because people assume nature is expendable so any nature-related risk is unwise?

W A garden full of life, human and otherwise by Rick Darke

"No other species on Earth is as influential as ours is, yet we are part of it all, connected to it all. Our actions have far-reaching consequences and if we're thoughtful, most of them can be good ones. Making a garden and living in it is a great way to practice the art of ethical, functional design.

A well-made garden should be full of life, human and otherwise, providing infinite, daily opportunities to experience that glorious multiplicity of things and living processes."

~ THE LIVING LANDSCAPE, P. 7



A dragonfly perhaps finding some insects here or just resting

Comfort and hope in the dependability of natural cycles by Doug Tallamy

"Unexpected encounters in our landscape are exciting, memorable, and just plain fun, and they regularly draw us into our yard to experience them, but equally rewarding is the anticipation created by what we do expect to happen each year. So many of the plants and animals that comprise our landscape execute their life histories in such predictable ways that we have come to look forward to these seasonal events as if they were approaching holidays. When will the first American toad sing? When will the juncos and white-throated sparrows arrive from the north in the fall and when will they leave in the spring?...

Cindy and I find comfort and hope in the dependability of natural cycles; to us they are the fulfilled promises of a vibrant landscape."

~ THE LIVING LANDSCAPE, P. 283



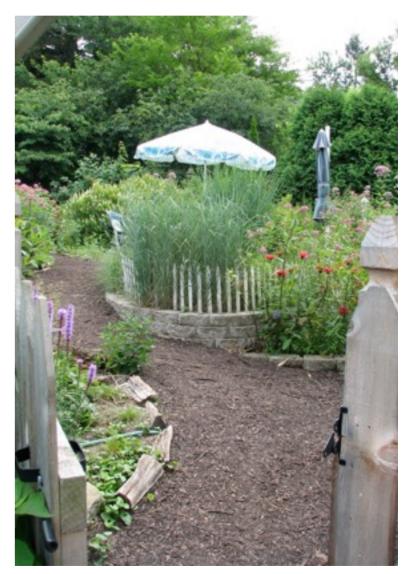
Male toads singing - a sure sign of spring!

The whole world in my yard by Janet Allen

When we create a living landscape, we learn firsthand how nature works in our yards and beyond.

Please read: (a PDF download)

https://www.hgcny.org/docs/course/Whole-World.pdf



What better place to reconnect with nature than right in your own yard?

Become a citizen scientist by Janet Allen

When you become a citizen scientist, you become a better observer and forge a stronger connection to nature even as you make an indispensable, irreplaceable contribution to conservation – a contribution money can't buy.

OPTIONAL: (a PDF download)

https://www.hgcny.org/docs/course/Citizen-Science.pdf



Citizen scientists tag monarchs to help scientists learn about their migration.



Some citizen science projects focus on plants. Why would you want to pay attention to this fading trillium? Because it's one of the plant's phenophases, i.e. "a distinct event in the annual life cycle of a plant or animal in relation to changes in seasons and climate."

Project BudBurst (www.budburst.org) is a national network of citizen scientists (both adults and school children) monitoring plants as the seasons change. As Project BudBurst says, "Every plant tells a story about changing climates."

Nature is good for our health, too

An increasing amount of research is exploring the benefits of nature for people — both children and adults.

We evolved in nature and we never outgrow our need to physically connect with the natural world.

Most of this research has focused on the benefits of getting out into parks and wilderness. But with an earthfriendly habitat garden, you can get many, most,



"I wonder who made those holes in the tree?"

or perhaps even more of these benefits since you'll have daily contact with a bit of nature right at home.

Immerse yourself in a forest for better health ~ NYS Dept. of Environmental Conservation

"Most of us sense that taking a walk in a forest is good for us. We take a break from the rush of our daily lives. We enjoy the beauty and peace of being in a natural setting. Now, research is showing that visiting a forest has real, quantifiable health benefits, both

mental and physical. Even five minutes around trees or in green spaces may improve health. Think of it as a prescription with no negative side effects that's also free."

This article lists the surprising benefits of forests to humans and provides links to the research.

Please read: http://www.dec.ny.gov/lands/ 90720.html



Other resources to explore:

Nature-Rx

This award-winning comedy series promotes the outdoors by way of a parody of pharmaceutical commercials. Clever and fun!

OPTIONAL 1-min. video at: http://www.nature-rx.org/

OPTIONAL research on the topic is noted at: http://www.nature-rx.org/research/

Health benefits of nature

~ American Society of Landscape Architects This article cites hundreds of freely-available research studies, news articles, and case studies, organized by adult and children health topics such as dementia, obesity, depression, heart health, and many others.

OPTIONAL list of references: https://www.asla.org/healthbenefitsofnature.aspx When trees die, people die by Lindsay Abrams / The Atlantic

"The curious connection between an invasive beetle that has destroyed over 100 million trees, and subsequent heart disease and pneumonia in human populations nearby."

OPTIONAL:

http://www.theatlantic.com/health/archive/2013/01/when-treesdie-people-die/267322/

BUT note that, contrary to the next to last paragraph in the article, research shows adding trees does NOT increase crime: OPTIONAL:

http://lhhl.illinois.edu/media/thepoweroftrees.htm



Exploring in soil is good for our minds and bodies

Good for children's health

7 science-backed reasons to get your kids outside by Lawrence Rosen M.D. / Children & Nature Network

This article details the benefits of nature for children and cites research.

OPTIONAL:

https://www.childrenandnature.org/2015/10/14/7-sciencebacked-reasons-to-get-your-kids-outside/



Screen-free fun!

Children & Nature Network

A wealth of materials on connecting children with nature.

OPTIONAL:

http://www.childrenandnature.org/

Richard Louv is co-founder of the Children & Nature Network.

Books by Richard Louv, a leader in human-nature interaction. * Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder

* The Nature Principle: Reconnecting with Life in a Virtual Age * Vitamin N: The Essential Guide to a Nature-Rich Life: 500 Ways to Enrich Your Family's Health and Happiness

At home with nature: Exploring soil and insects right in the backyard





Our connection to nature?



Is this your main experience "in nature"? Does it benefit your mind, body, and soul?

Section 4

"But what will the neighbors say?"



Most neighborhoods consist of "neat" yard after "neat" yard that conform to convention but that nevertheless support little life.

One of the biggest concerns people have when they start creating an earth-friendly landscape is what their neighbors will think.

But by following a few simple principles, you can create an earth-friendly yard acceptable to – and even admired and enjoyed by – most neighbors in most communities.

Redefining curb appeal by Tom Oder / National Wildlife Federation

Do we have to conform to outdated lawn fashions in order to maintain our home's real estate value? Oder lists myths about using native plants in the landscape and offers Doug Tallamy's rebuttal to each of these myths.

Please read:

https://www.nwf.org/Magazines/National-Wildlife/2015/AprilMay/ Gardening/Redefining-Curb-Appeal



Adding some lawn chairs can humanize the landscape

Doug Tallamy disproves opposing myths about native plants by Susan Harris

Native plants are important because native insects can eat them. So will native plants be defoliated? The research described in this article shows that in both conventional and native landscapes, leaf damage was minimal.

OPTIONAL article describing this research: http://gardenrant.com/2011/08/doug-tallamy-disprovesopposing-myths-about-native-plants.html



This sundial or other yard art is another way to humanize landscapes.



When you look closely, you see why an oak tree is a "biodiversity allstar." It's clear that these leaves have provided food for many lepidoptera — and thus baby birds as well as moths and butterflies.



When viewed from a few feet away, the same tree looks perfectly fine.

Signs signal your garden's purpose

Signs indicate that your landscape has been designed with a purpose. Signs can also educate people about habitat issues.

You can purchase signs such as these from these organizations:

- Pollinator Habitat sign from The Xerces Society at http://www.xerces.org/store/
- Monarch Waystation sign from Monarch Watch (must be a certified Waystation) at http://shop.monarchwatch.org/
- Wild Ones sign from Wild Ones Store at https://wildones.org/
- Certified Wildlife Habitat from National Wildlife Federation (must be a Certified Wildlife Habitat to purchase the sign) at https://www.nwf.org/en/Garden-for-Wildlife/Certify
- Pesticide Free Yard sign from Beyond Pesticides at http://www.beyondpesticides.org/programs/lawns-andlandscapes/overview/be-a-model-for-your-community
- An assortment of signs you can print yourself and laminate are available from Our Habitat Garden at http://ourhabitatgarden.org/act/signs-download.html



Signs explain your yard and educate passers-by

Making "messy" look goodby Rhiannon Crain / Habitat Network

Some simple design choices can transform a yard from "messy" to beautiful without losing any habitat value.

Please read:

http://content.yardmap.org/learn/making-messy-look-good/

Cues to care: The language of neighborly landscaping by Sally Elmiger / Univ. of Wisconsin

This article (originally published in the Wild Ones Journal) tells how to design yards that will be accepted more readily – and possibly appreciated if not actually emulated – by those who have traditional ideas about landscaping.

Please read:

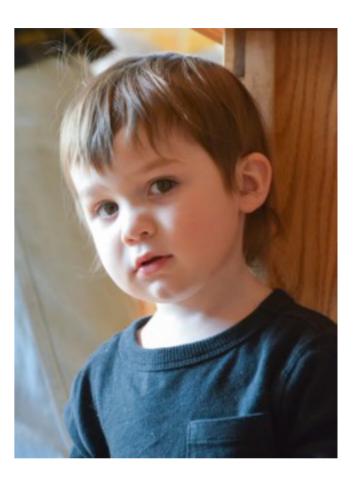
https://www.uwsp.edu/cnr-ap/UWEXLakes/PublishingImages/ resources/restoration-project/cuestocare.pdf

Whose opinion? by Janet Allen

It's understandable that people want to be a good neighbor and help create a beautiful community that's pleasant to live in.

But as we weigh how many of our current landscaping practices harm the health of people, wildlife, and nature, where does our responsibility lie?

Should we be concerned more about what neighbors say today ... or



about what our descendants will say in the future about the choices we made, the road to a healthy, living, livable planet we did or did not take?

As John James Audubon said, "A true conservationist is a man who knows that the world is not given by his fathers but borrowed from his children." The worst thing that will probably happen — in fact is already well underway is not energy depletion, economic collapse, conventional war, or the expansion of totalitarian governments.

As terrible as these catastrophes would be for us, they can be repaired in a few generations.

The one process now going on that will take millions of years to correct is loss of genetic and species diversity by the destruction of natural habitats.

This is the folly our descendants are least likely to forgive us.

~ E. O. Wilson, Biophilia, 1984

View from an airplane by Sara Stein

"The same two species [goldenrod and milkweed] grow on my place. They grow here because I planted them. But I'm free to stand by while they die of neglect or even to kill them outright if I want.

Because they're mine: I own the land.

How strange a notion! The perception of ownership isn't shared by any of the creatures who live on the land, or from it, or cross over it. I own the plants, but not the relationships by which their roots are nourished, or their flowers pollinated, or their seeds dispersed. I own the dirt, but not the living systems that maintain it. Yet ownership gives me license to harm all these things that don't belong to me.

This thought was strange enough in intimate surroundings, touching the goldenrod's velvet leaves, stroking the milkweed's silk. It became more uncanny still as I watched the whole width of the continent, coast to coast, all owned, every acre of it, slide slowly beneath the belly of the airplane bound for California. Conservation departments, nature preserves, the very law of the land, can't protect your lot or mine. It's up to us to do it of our own free will because we understand that the land is not our own but only in our keeping."

~ PLANTING NOAH'S GARDEN PP. 16-17

Our neighborhood and community

One person's landscape can make a difference, but it alone cannot preserve the planet's biodiversity.

Working together, though, in our own communities and beyond, we can create connected habitats and restore functioning ecosystems.



35 years ago — a sterile conventional landscape



Now a landscape full of life!

A story for Ravinians by May Theilgaard Watts



Trilliums

Consider the thousands of subdivisions that have been created since the following piece was written in 1936. These subdivisions have generally been built in previously functioning ecosystems or on productive farmland.

Watts foresaw this transformation and wrote the following piece (as a preface to a larger booklet) to urge her city-dweller neighbors to embrace the native trees and plants.

"West of Chicago lies a bungalow and cottonwood suburb with a catalpa tree, or a distorted mulberry, or a round bed of cannas, in the exact center of each front lawn. Not long ago these streets were cut through rich woods. There were red oaks, white oaks,

sugar maples, and lindens above, and yellow violets, ironwood, elderberries, wood anemones below.

A certain family bought a lot out there. They enjoyed the beauty of texture in the varied foliage of the forest undergrowth.

'We are tired of the neat smug scenery of Rogers Park,' they said. 'Here is a different beauty, — a tangled richer loveliness.'

When their house was being completed they sent out the laborers to clear the property. It was March. No one knew when a clump of trembling aspens followed hawthorns and viburnums and crabs on to the roaring bon-fire. These were all 'underbrush' to the laborers, and they had been ordered to 'Clear out the underbrush.'

When this job was finished, they took the heaped-up soil excavated for the basement, and spread it neatly and firmly to the four exact corners of the property. No one knew when a lush bed of white trilliums and sweet wild phlox was forever buried alive under a blanket of stiff wet clay. Nor did anyone realize that the leveled surface raised the soil several inches around the trunks of those white oaks and hickories that had been marked for preservation, and that this soil was cutting off the air supply of the feeding root tips, so that even these trees must soon die.

Abundant rich forest still lay all around the subdued lot, and birds sang. It was a beautiful place to live.

Others thought so too. They came, and each one firmly corseted and manicured his own lot, before settling down to enjoy the gypsy-like charm of his surroundings.

The dying forest trees were gradually replaced, mostly with cottonwoods. Presently there was no undisciplined charm left to distract the inhabitants from a comparative contemplation of each other's lawns and privet hedges. So they settled down to planting red geraniums on these rectangular graves where they had buried beauty.

But last Spring the same family that had so appreciatively bought the first lot in that suburb west of Chicago – discovered Ravinia. They saw the gray rain of aspen catkins. They saw crab apples in bloom above yellow violets, and they saw new white oak leaves above white trilliums. They bought a beautiful wooded lot.

Will they send laborers out to clear and level it?

This little book seeks to point out to such new neighbors the things that are probably on their property, and to talk to our old neighbors about the charms of Ravinia, so that we may enjoy them, and perhaps lend a hand toward preserving them and even reinstalling some of them."

From http://thevisionofmtw.weebly.com/ ravinia-her-charms--destiny.html Watts' biography and photo is in Session 1.



W This is the ark by Sara Stein

"We don't have to—indeed, we neither can nor should—each provide all habitats, every sort of food. You plant nut trees and I'll plant spruce, you keep a berry thicket and I'll do the tall grass, or the bog, the woodlot, the crowds of fruiting shrubs and beds of wildflowers.

But let us weave them together into something big enough to matter by connecting each patch with others at the corners and along the boundaries.

This is the rich, new landscape; this is the new kind of gardener who asks not whether he should plant this ornament or another but which patch is missing from his community, how he can provide it, and how animals will move from his patch to the next.

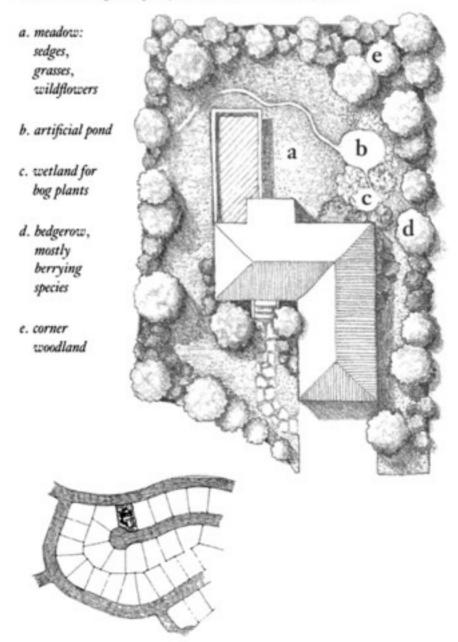
This is the ark."

~ NOAH'S GARDEN, P. 97

Mosaicby Sara Stein

Below is a plan for a lot in a tract development. Notice how it fits in the development—an oasis in a desert of lawns.

Michael McKeag's site plan for bis lot in a tract development:

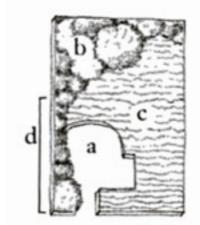


But it doesn't have to remain an oasis!

Here is how Stein suggests we create larger habitat areas in an existing subdivision:

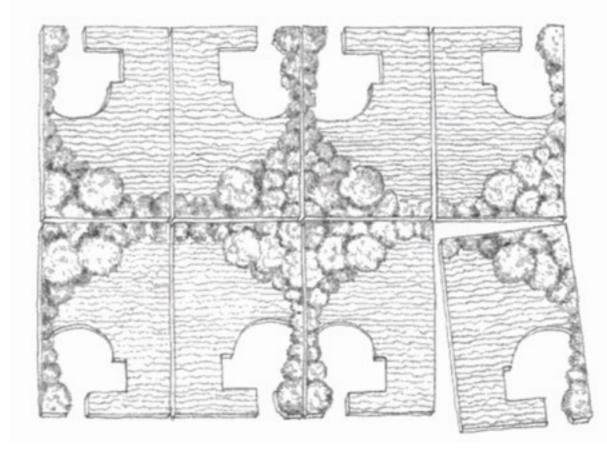
"Take the rectangle of land, reproduce it twenty times; lay the reproductions out in rows; place the rows back to back. See the pattern that emerges? This pattern of small woodlots edged with thickets, connected by hedgerows, and dotted with flowering meadows is the mosaic ecosystem suburbia could piece together over much of America, and each neighbor who thinks your place is comely and follows your example adds another rectangle to the overall design."

~ NOAH'S GARDEN, P. 48-51



The mosaic ecosystem of future suburbia:

- a. space for bouse and lawn or terrace
- b. corner woodland
- c. meadow
- d. bedgerow



A clustered subdivision for new developments Instead of dividing a given amount of space equally among the lots, a clustered subdivision puts houses closer together with smaller individual yards and shorter driveways. Everyone has common access to open space, and there's a much smaller environmental impact. Good for people, good for nature.



Partridgeberry Place, a clustered design in Massachusetts https://www.mass.gov/service-details/demonstration-1-low-impactdevelopment-lid-subdivision

The greening of suburbia

~ Growing a Greener World (Episode 509) / PBS Can we design communities to include nature right from the beginning? This episode describes a new vision for a community that is designed right from the start to conserve prairie, pasture, and wetlands.

OPTIONAL 25-min. video:

http://www.growingagreenerworld.com/new-green-communities/

Urban nature: How to foster biodiversity in world's cities

by Richard Conniff

As the world becomes more urbanized, researchers and city managers from Baltimore to Britain are recognizing the importance of providing urban habitat that can support biodiversity. It just may be the start of an urban wildlife movement.

Note the importance of citizen science data.

For more information about participating in this important effort, visit https://ebird.org/home

OPTIONAL - more about urban biodiversity: http://e360.yale.edu/feature/ urban nature how to foster biodiversity in worlds cities/2725/

Habitat connectivity by Rhiannon Crain / Habitat Network

This two-part series first explains some basic concepts about habitat connectivity and then suggests practical ways your own yard can connect existing habitat elements.

W An introduction to habitat connectivity

Please read:

http://content.yardmap.org/learn/habitat-connection/

W Habitat connectivity in the yard

Please read:

http://content.yardmap.org/learn/habitat-connectivity-2/

Connecting to the future by Sally Elmiger / Wild Ones Journal

Corridors that connect natural areas in our communities can help sustain our environment, native plants, and local wildlife. A threepart series.

OPTIONAL:

http://www.niagaraheritage.org/PDF/elminger1_2_3.pdf

The Pollinator Pathway: Connecting landscapes in the age of humankind by Sarah Bergmann / TEDxRainier

"Ecosystems thrive best when they're connected. Now, in the age of humankind, how do we help create better ecosystem connections in our urban landscapes? Pollinators are dependent on access to a range of plants. Learn about a transformative pilot project and living classroom that links landscapes across Seattle."

Please watch this 6-minute video of the Pollinator Pathway founder's TEDx Talk: https://youtu.be/uRYPfRqhu6E

A design challenge to the planet

~ Pollinator Pathway

Seattle's Pollinator Pathway is a corridor that connects two natural areas by using the hellstrip along residential areas – but it's more than that.

It's about helping pollinators – but it's more than that.

OPTIONAL - more about this exciting project: http://www.pollinatorpathway.com/about/

and WHY this is an important undertaking: http://www.pollinatorpathway.com/why/

Local governments can help facilitate change

It has become fashionable to expect government to be ineffective or just get in the way. That is, of course, true sometimes.

But when government works well, it can have very positive results. Here are two examples.

Love 'Em and Leave 'Em in the community ~ Westchester County, NY

There are financial and environmental advantages for towns and cities by leaving leaves.

OPTIONAL - This overview shows the many benefits to a community: http://www.leleny.org/p/ municipalities.html

If your community is interested in a similar project, note that Westchester County shares its toolkit at:

http://www.leleny.org/p/lele-toolkit.html



Weed laws and ordinances

~ Bret Rappaport/John Marshall Law Review Wild Ones supports weed laws that promote responsible native plant landscaping.

This material presented to assist you in your struggle to overcome non-sustainable ordinances and biases against native plants and natural landscaping.

Rappaport is a past president of Wild Ones.

OPTIONAL:

https://repository.jmls.edu/cgi/viewcontent.cgi? article=1842&context=lawreview



Believe it or not!

Sometimes you just have to shake your head in disbelief.

In 2016 — after years of increasing publicity about the plight of monarch butterflies — a town cited a homeowner for growing milkweeds and goldenrods in her front yard. (*Recall that in Session 4, we noted that milkweed is essential for monarch caterpillars and that goldenrods' nectar fuel their migration.*)

Even worse, the code enforcement officer informed the homeowner that any plant sold by a certain local nursery,



Monarchs visiting milk"weed" in a Monarch Waystation

however, would be automatically acceptable. A quick check of that nursery showed they sold no milkweeds, but did sell many other plants appearing on the state's invasive plant list. Indeed, these plants, by law, must have a tag, which they dutifully displayed, noting they are invasive and cannot be planted in natural areas (ignoring a main vector of invasion — birds eating the berries and spreading them into natural areas).

Why is a town allowing and implicitly endorsing planting invasive plants, while forbidding native plants critical to the survival of a beloved insect and a healthy environment?



Butterfly "weed" (Asclepias tuberosa) was named Perennial Plant of the Year for 2017 by the Perennial Plant Association

Light pollution effects on wildlife and ecosystems ~ International Dark-Sky Association Artificial light at night affects humans, but light pollution in our yards and communities affects animals, plants, and ecosystems, too. Although homeowners can do their part to reduce light pollution, this issue requires a community-wide solution.

OPTIONAL:

https://www.darksky.org/light-pollution/wildlife/

d ecosystems, uce light Something we don't consider: the impact of our communities' artificial lighting on plants. OPTIONAL but recommended (a PDF download): https://puyallup.wsu.edu/wp-content/uploads/sites/403/2015/03/ light-pollution.pdf

increased light can't hurt"

The myth of night light: "Unless you're a poinsettia,

by Linda Chalker-Scott, Washington State



Lights from space

Photo: NASA, Public Domain

With your neighbors by Rhiannon Crain / Habitat Network Tips for working with neighbors for a bigger impact.

OPTIONAL:

http://content.yardmap.org/learn/with-your-neighbors/

Increase canopy cover by planting and maintaining trees by Megan Whatton / Habitat Network OPTIONAL: http://content.yardmap.org/learn/canopy/

Wildlife-friendly certification for your community ~ National Wildlife Federation OPTIONAL:

http://www.nwf.org/garden-for-wildlife/create/communities.aspx



La Citta Vita (Community planning Uploaded by AlbertHerring) [CC BY-SA 2.0 (http://creativecommons.org/licenses/by-sa/2.0)],

Plant a billion trees project

~ The Nature Conservancy

America's forests are facing a perfect storm of threats. Learn how you can help.

OPTIONAL:

http://www.plantabillion.org/locations/united-states/

Community Tree Committees

You probably have new-found appreciation for the importance of trees in your community. Many trees are privately owned in people's yards, but many trees are in public areas. Except for removing trees when they're a hazard (or in the way of power lines), who is watching over the health of your community's urban forest?

Many communities accomplish this by having citizen tree committees. What's a tree committee? Here's one definition from the Massachusetts Urban and Community Forestry Program:

"A Town Committee or Tree and Forest Board or Committee is a citizen-led group that works with town public officials to improve the health of the urban and community forest through tree plantings, advocacy, education, management, and maintenance activities."

If your community doesn't have a tree committee, why not start one? Many states have resources available for these community groups.

Here's an example of assistance available in New York State: http://www.dec.ny.gov/lands/5281.html **NOTE:** One way many communities participate in this effort is through the Tree City USA program, sponsored by the Arbor Day Foundation.

Be aware that many of the plants the Arbor Day Foundation provides, such as Rose of Sharon, Korean boxwood and forsythias (among others), are not native.

And since they suggest plants based on hardiness zone, not ecoregion, some of their suggested plantings, while appropriate in one part of the country, may not be appropriate for another part of the country in the same hardiness zone. Be cautious!



Choose trees that belong to your ecoregion!

Section 6

How does change happen?

Change is hard for individuals, for neighborhoods, for communities and for the world beyond.

But change must happen.

How can we facilitate the necessary changes?

How can we be realistic in expecting how and how quickly change happens?



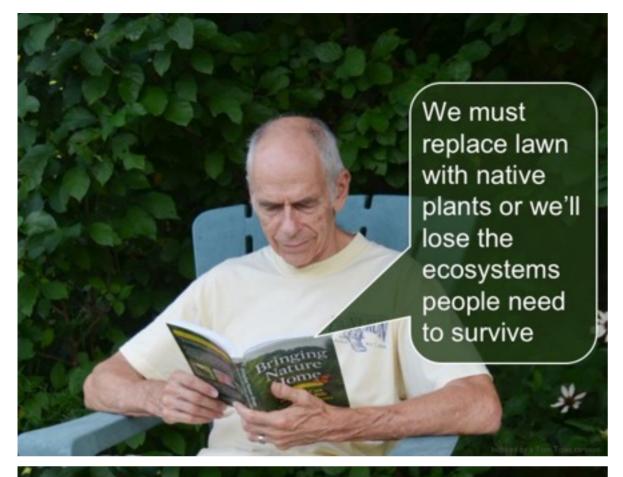
Butterflies are accustomed to change! This black swallowtail caterpillar has formed a silk "harness" attached to a stick. It will soon become a chrysalis, awaiting its transformation to an adult butterfly.

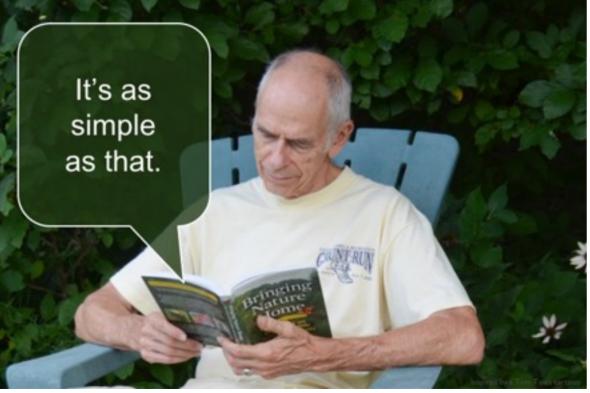
A hard decision? by Janet Allen

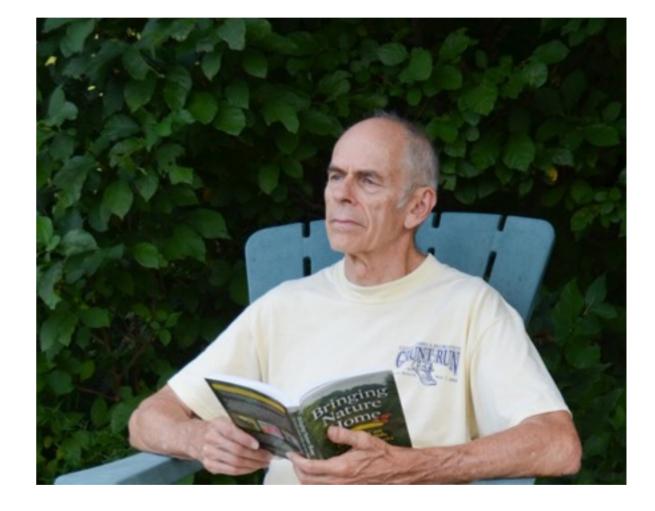
Change starts with individuals and change isn't easy. But do we have an alternative? What changes are we willing to make in our own yards? In our communities?

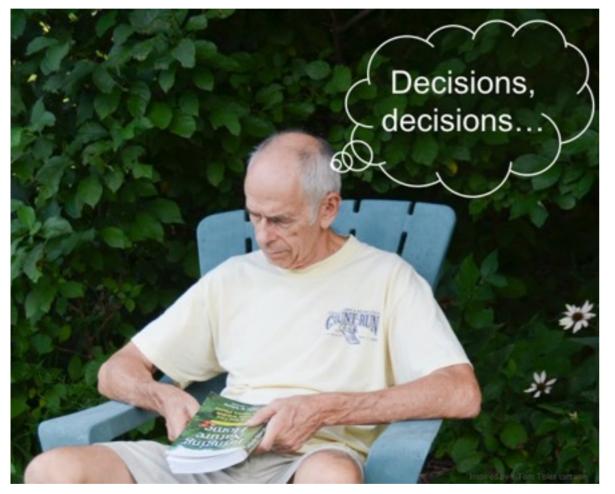


How we decide to care for our piece of the earth TODAY determines the quality of their TOMORROWS









Inspired by a Tom Toles cartoon

At the individual level, we face two significant psychological barriers.

First, we find it difficult to fully grasp the enormity of living at a time when we are destroying the natural systems on which all life (and the global economy) depends. Somehow that reality does not seem real.

Second, we are not able to respond to threats that are remote in time and space. For example, I might believe that future generations are threatened as certainly as a child on a railroad track in front of a speeding train. For that child, I might risk my life. For future generations, I find it difficult to even forgo comforts.

~ Dick Roy, founder of Northwest Earth Institute

[In response to the question about climate change]

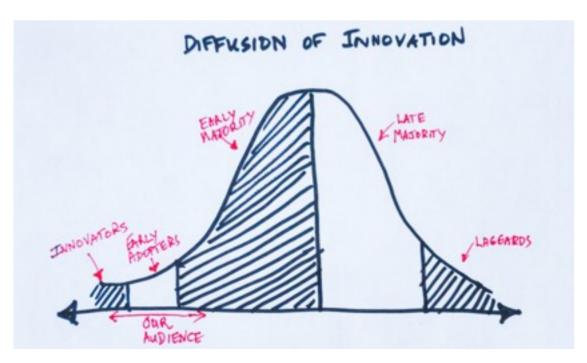
Diffusion of innovation: Adoption curveRARE

New ideas spread in fairly predictable ways. As we encourage others to adopt earth-friendly landscaping featuring native plants we might expect some people to get on board earlier than others. Understanding this dynamic allows us to choose to spend our efforts where change is most likely to happen.

Please watch this 3-minute video:

https://www.youtube.com/watch?v=9QnfWhtujPA

Diffusion of Innovation Theory: The "S" Curve OPTIONAL This 3-minute video reviews and extends the idea: https://www.youtube.com/watch?v=NiNoNYLBabA



Yes, change can happen!

Here are some surprising changes that have happened in the last few decades.





It wasn't more than a decade ago that it was assumed that dogs "doing their business" while on a walk was just natural. Now it's a social no-no not to scoop the poop.

Just a few decades ago, people could chain smoke all day and pollute an entire office forcing everyone to breath the toxic fumes. Wasn't it their right to smoke?

Now, no smoking even on the this library's grounds? Even in bars and restaurants? It was a hard-fought battle but (in many areas), common sense won.

Young people may take seatbelts for granted, but older people will remember the battles over requiring seatbelts.

Children now are in carseats from the beginning.

Yes, people can change!

Does nature have a marketing problem? by Brent Drever / TEDx Talk

The founder of Nature-Rx (whose video we saw earlier in this session) discusses how marketing can help change our relationship to nature in this "*Sex, Spock, and Climate Change*" talk.

OPTIONAL 15-min. video: http://www.nature-rx.org/nature-rx-ted-talk/

Fostering Sustainable Behavior – Communitybased Social Marketing by Doug McKenzie-Mohr

This entire book is online and full of research-based recommendations on fostering sustainable behavior in communities. The site focuses on conservation, energy efficiency, transportation, waste reduction, and water efficiency, but the tools used apply to any behavior change related to sustainability.

OPTIONAL - This fascinating book is at: http://www.cbsm.com/pages/guide/preface/

OPTIONAL - Site resources, including case studies, are at: http://www.cbsm.com

Can one person make a difference?

Reading about new ideas from experts, then discussing these ideas with fellow citizens is

a powerful way to learn and be inspired to act. That's what this discussion group is all about!

A recent study found most people care about climate change but don't talk about it. They fall into a "spiral of silence" fearing their opinion will cause a loss of social status.

The same may be true of earth-friendly landscaping. But how will attitudes and practices ever change unless individuals talk about these issues and display sustainable landscaping practices?



A pipevine

Share by example and by word of mouth what you've learn in this discussion course ... and you'll help change the world.

Is there a Climate "Spiral of Silence" in America? by Edward Maibach et al. / Yale Climate Change Communication Program:

More details about the "spiral of silence."

OPTIONAL:

http://climatecommunication.yale.edu/publications/climate-spiral-silence-america/

This guy just revived a butterfly species in his backyard

by Susan Bird / EcoWatch

We learned earlier about the atala butterfly population being unintentionally boosted by the popularity of coontie, its host plant, as a handsome landscape plant.

This is the story of a man who intentionally restored the host plant of a native butterfly that was disappearing. *And it again reinforces the prime importance of NATIVE PLANTS in supporting life on earth!*

OPTIONAL 2-minute TV news video of this fascinating story: http://www.ecowatch.com/tim-wong-butterflies-1967038709.html With the right management, Pennsylvania landowners bringing birds to forest

~ Natural Resources Conservation Service

By intelligently managing their small forest, these landowners made a difference for wildlife and for themselves.

OPTIONAL:

https://www.usda.gov/media/blog/2016/08/25/rightmanagement-pennsylvania-landowners-bringing-birds-forest

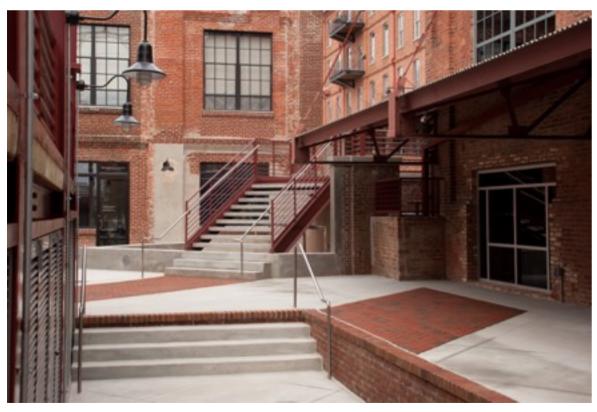


The world beyond our community

It's important to plant native plants to create habitat in our own yards and to use earth-friendly gardening practices.

And it's essential to encourage our neighbors to create living landscapes and extend these throughout our communities.

But it's critical that we help these ideas spread beyond our communities to support a healthy planet.



This isn't the only urban option. Let's build nature into our cities!

W The importance of local action by Rhiannon Crain / Habitat Network

What we do on a local level is not only powerful in itself, but can create change at regional, national, and global levels.

Please read:

http://content.yardmap.org/learn/power-of-local/

Let's create a worldwide homegrown park! by Richard Louv / Children & Nature Network What if we created a wildlife corridor that stretched around the world, beginning in our own backyards? As Tallamy said, "The single most effective thing we can do is build biological corridors that connect isolated habitat fragments. That will take the collective effort of all the landowners in between any two fragments." Louv extends this idea to the whole world.

OPTIONAL:

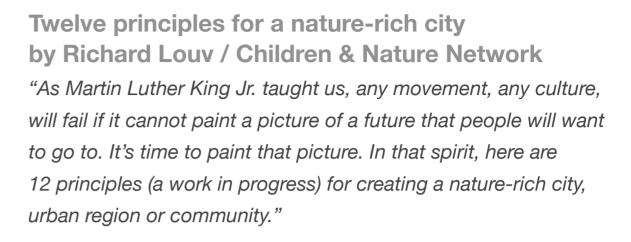
http://www.childrenandnature.org/2016/03/14/lets-create-aworldwide-homegrown-park/

Family Nature Clubs ~ Children & Nature Network

"What if parents, grandparents, and kids around the country were to band together to create nature clubs for families? What if this new form of social/nature networking were to spread as quickly as book clubs and Neighborhood Watches did in recent decades? We would be well on our way to true cultural change."

OPTIONAL:

http://www.childrenandnature.org/initiatives/families/



OPTIONAL:

http://www.childrenandnature.org/2016/10/18/12-principles-for-anature-rich-city/



Their future must include nature



You can create life even in the hellstrip between the sidewalk and road!

If some of these answers seem radical or far-fetched today, then I say wait until tomorrow.

Soon it will be abundantly clear that it is business as usual that is utopian, whereas creating something very new and different is a practical necessity.

~ James Gustave Speth Dean, Yale School of Forestry and Environmental Studies

[Speth is referring specifically to the limits of growth, but the concept is also quite applicable to changing our treatment of the earth in our yards - 2008]