

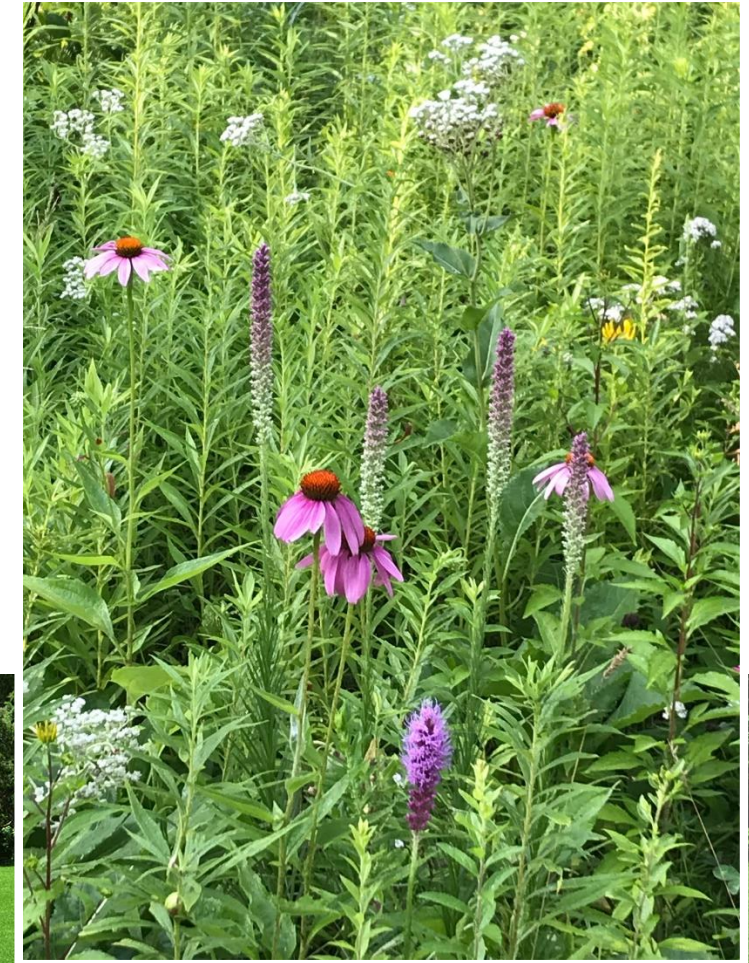


Evolve Your Lawn

Start Growing Natives in Your Backyard

With Angela Sisson

Hosted by the Town of Gardiner ECC
At the Gardiner Library



How to get started with ecological landscaping healthier more wildlife friendly backyard

-Steps to take to get started

-Resources including

design book pdf

plant list spreadsheet

organizations-websites

plant sources

-Pollinator pathways

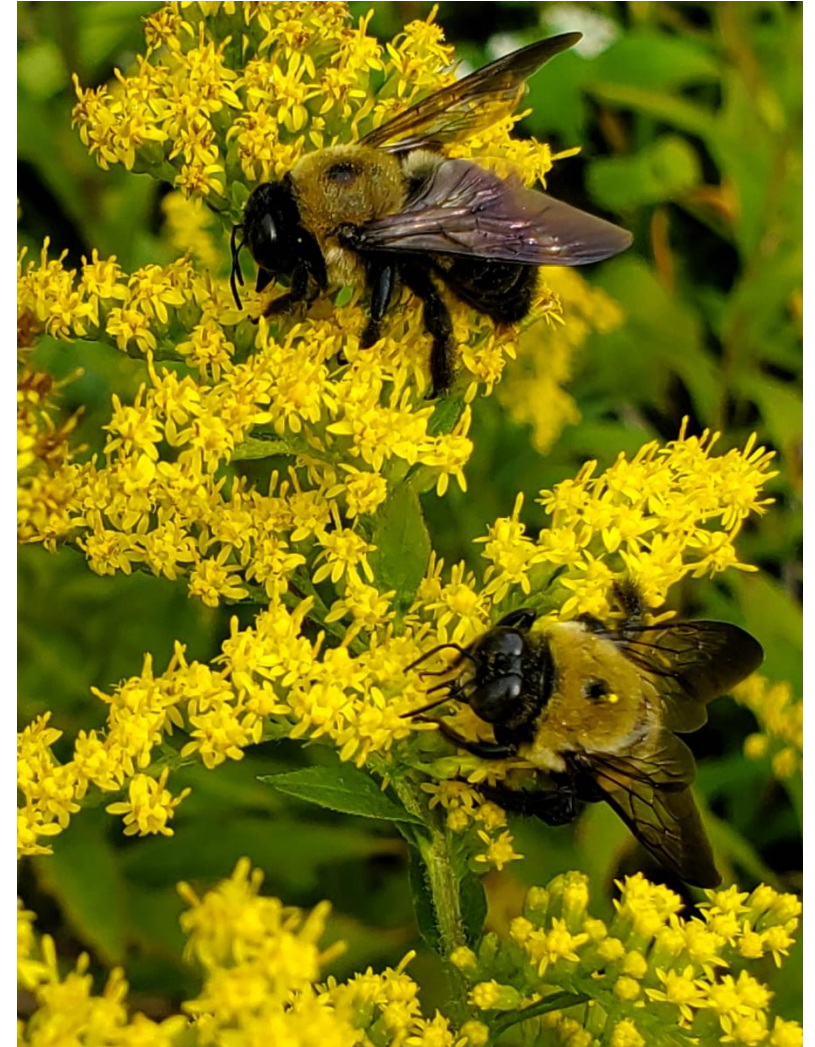
Walkkill Valley Pollinator Pathway

Walkkill Valley Land Trust & WV Rail Trail



Why we're here now...we have a problem

- Insect & bird populations have declined steeply.
Causes: climate change, habitat & biodiversity loss, insecticides
- 90% of all plants—not just food plants—are insect-pollinated
- Insects perform 95% of pollination
moths-butterflies, bees-wasps, flies, beetles
- 96% of songbirds feed their young insect larvae
insects link in food web between plants and animals
- Insects are *The Little Things That Run the World* E.O. Wilson



Traditional landscaping – part of the problem we have control over

- yard clean up removes habitat
- leaf blowing
 - (don't alienate landscapers—we need them)
- over mulching (mulch volcanoes kill trees)
- tilling
- pesticide use (insecticides)
- exotic plants are the norm



HOW TO MULCH RESPONSIBLY?



Ecological Landscaping – part of the solution

-Pollinator pathways gateway to healthier eco-friendly landscaping

Focus on saving pollinators
empowering people

-Common catchphrases

-Leave the leaves

(most difficult change to make)

-Lawn reduction & pollinator meadows

-No-till gardening & hugelkultur

-Rewilding

-Plant native



Why are native plants so important?

Coevolution between plant & insect

- Insect-pollinated plants both attract and repel insects
- Attract adult insects with nectar in flowers
- Repel baby insects with toxins in leaves
- Adaptation and specialists

Monarchs, adapted to milkweed toxins

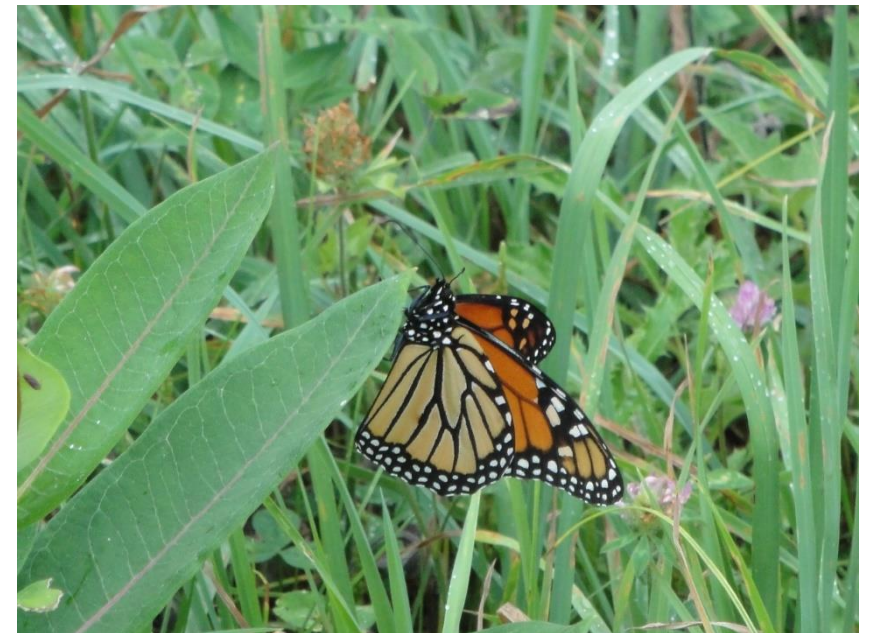
- Monarchs and swallow-wort

Pollinators can eat nectar from both natives & exotics

- Specialist pollinators can only eat leaves of native host
- Most pollination is performed by specialist insects
- Most insects need native plants to reproduce

Coevolution and exotic invasive plant species

- Natural predators



Problem lawns

Lawns require inputs:

- Chemicals—pesticides & fertilizers

 - Dead zone in Gulf of Mexico-fertilizers

- Watering—turf grass is cool season

 - suited to British climate

- Mowing—short mowing, shallow roots

 - increases storm-water runoff

Default groundcover

- #1 Crop in the US



Functional lawns

Turf grass is a resilient surface—handles foot traffic

- Recreation, circulation, trails, edging

Area rug vs. wall-to-wall carpet

Reduce inputs

- No chemicals or watering

- Mow higher for deeper roots

 - No-mow mixes (Prairie Moon)





Pollinator Pathway

Solutions—

Change how we landscape

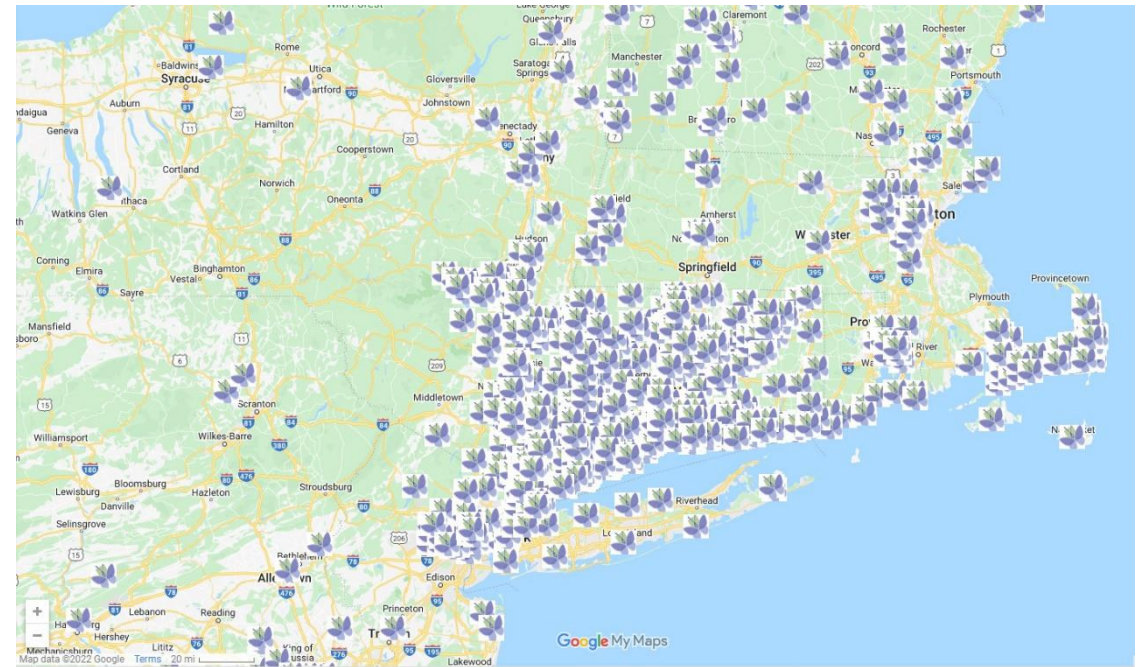
Steps you can take:

-Join a pollinator pathway

Pathways focus on landscaping practices

-Pollinator pathways, recent grassroots movement

Triggered by recent awareness of insect loss

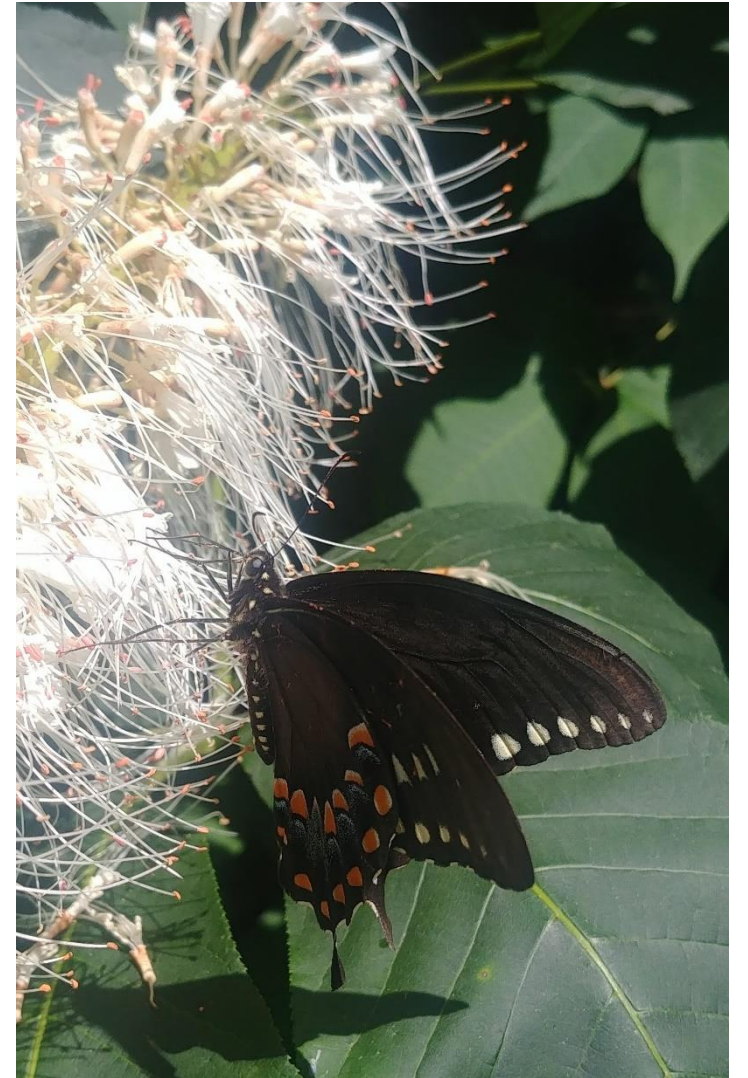


Pollinator **pathway** concept

- Insects need to eat as they travel
- Backyards – corridor of pit stops

Joining a pollinator pathway is easy

1. Start planting native species.
2. Start removing invasive species.
3. Avoid using pesticides, especially insecticides.



Different ways of learning

- Different stages
- Find something that works for you

We arrive here from different backgrounds

- edible gardening
- horticulture
- wildlife gardening
- into bugs
- birding
- rail trails
- watershed groups
- natural landscaping

TYPES OF LEARNERS*



My gardening background

- 40 years ago, Ruth Stout's book
- started w/vegetables
- flowers & wildlife
- beauty of flowers is gateway to nature

- Backyard Wildlife Habitat (early 80s)
- Gardening pushed to background
 - but remained a passion
- Conway School degree (2004)
 - turning point
- New landscaping concepts & methods
 - perennial meadows (not annuals)
- Pollinator pathway program (2020)
 - help other people get started
 - not gardening alone



Gardiner Library Pollinator Garden

- 500 square-foot perennial garden
- Lawn being smothered w/plastic tarp
- Planting this spring with landscape plugs into dead lawn
- Planted densely—one plant/square foot
- plants replace mulch



Ecological landscaping methods at Library

- Planting native species
- Spacing close to suppress weeds
eliminate need for mulch
- Smothering avoids pesticides and tilling
disturbance encourages invasive plants
destroys soil structure & micro-organisms

- Reduced maintenance overall
Watering & weeding first season

- Public gardens require some maintenance
Public perception can be critical to success
Neat edges indicate caring-
Signs indicate intentional



Public places—Rail Trails

- Library Garden is on the Walkkill Valley Rail Trail
- Rail Trail recreational use—more exposure
- Rail Trails are also wildlife corridors
making them pollinator pathways
- Effort to promote more pollinator habitat on rail trails



May 2022 - Gardiner Library Pollinator Events

-May 13th (Rain date May 14th)

Library Pollinator Garden Planting

Come join us for the planting

Learn more about planting for pollinators

-May 21st

Native Plant Sale

Opportunity to purchase inexpensive perennials

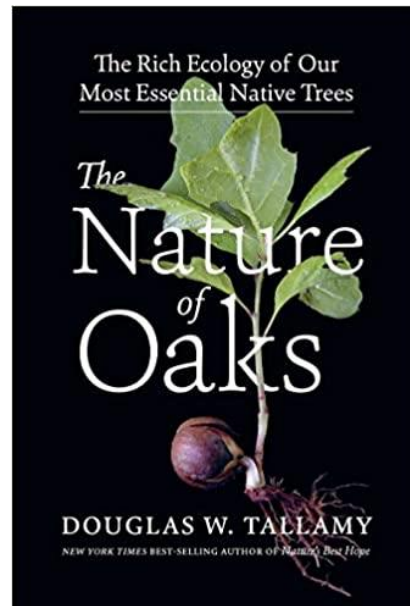
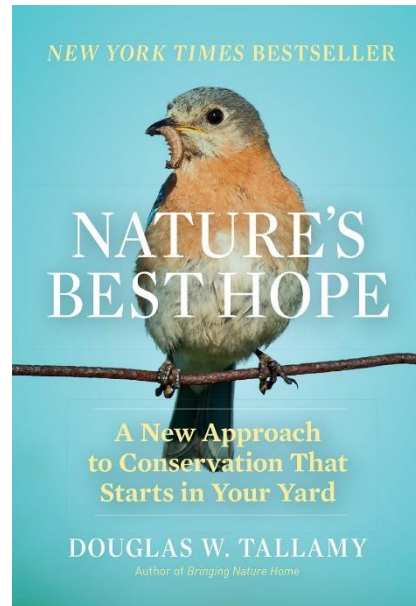
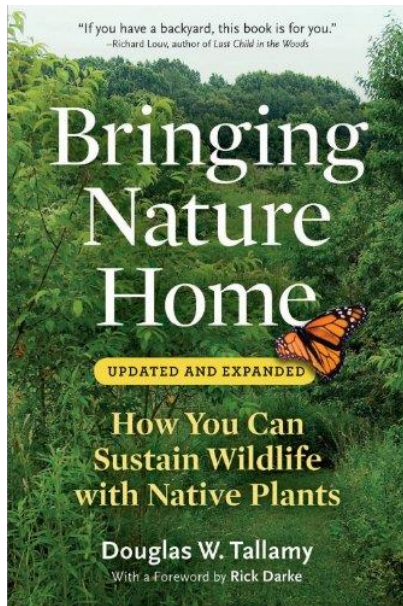
Buy & see the same species planted in the garden

Future sales can include trees & shrubs



The Doug Tallamy Section

- Main spokesperson for the native plant cause
- Inspired more people than anyone else
- 7 steps to get you started



Take one or more of these steps

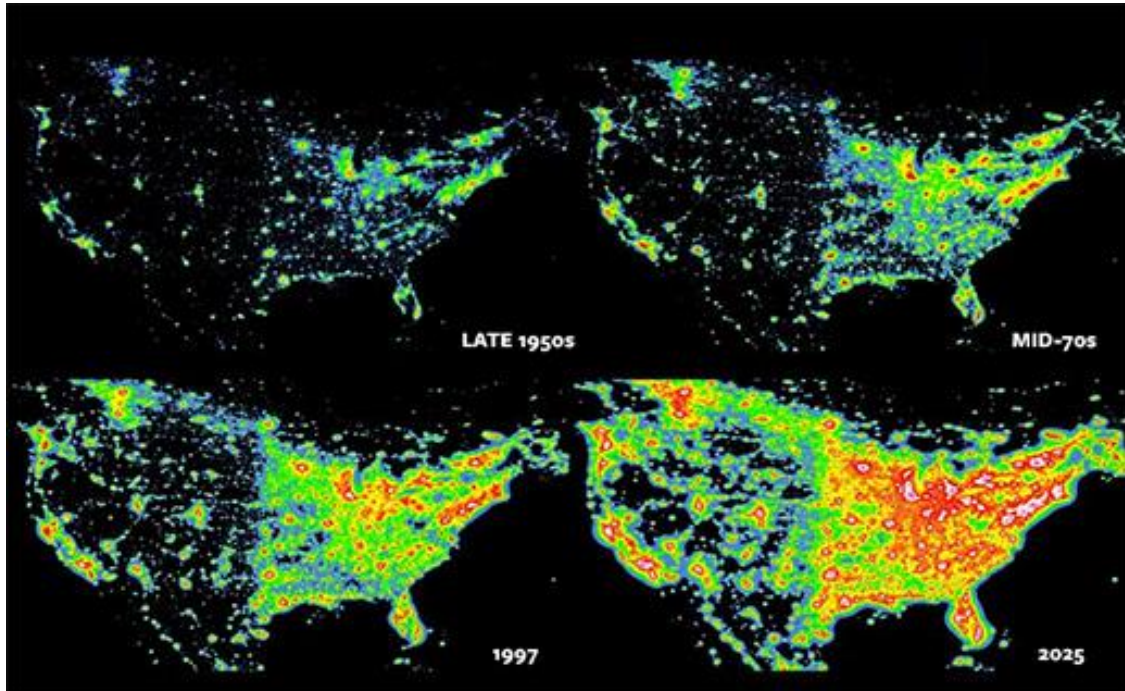
1. Plant **native** pollinator gardens and meadows.
Pollinators require mostly native plants to reproduce, and 90% of all plants require pollinating insects to reproduce.
2. Remove existing **invasive** plant species and do not plant them.
3. Avoid **pesticides** especially insecticides.
Homeowners use 10 times as much pesticide per acre as farmers
4. Reduce our **lawns** by half—
We have 40 million acres of lawn in the US.
If we could reduce our lawns by half,
this “Homegrown National Park”
would be larger than our largest national parks combined.



5. Turn **lights** out

Light pollution is killing moths and nocturnal insects.
Recent reports & studies

For safety and security
Try motion lights.
Or try down-lighting.



NIGHT SKY BLOTTED OUT BY LIGHT POLLUTION

VISIBLE NIGHT SKY

VERY BAD


BAD

BETTER

BEST

Bad, better, best

Use outdoor lighting responsibly by only using it where it's needed, when it's needed, and in the amount required. Use the lowest light level required, limit blue-violet light, utilize timers or motion sensors, and use shielding.

 INTERNATIONAL DARK SKY WEEK
APR 5 to 12 2021

6. Plant keystone species

Keystone species make up

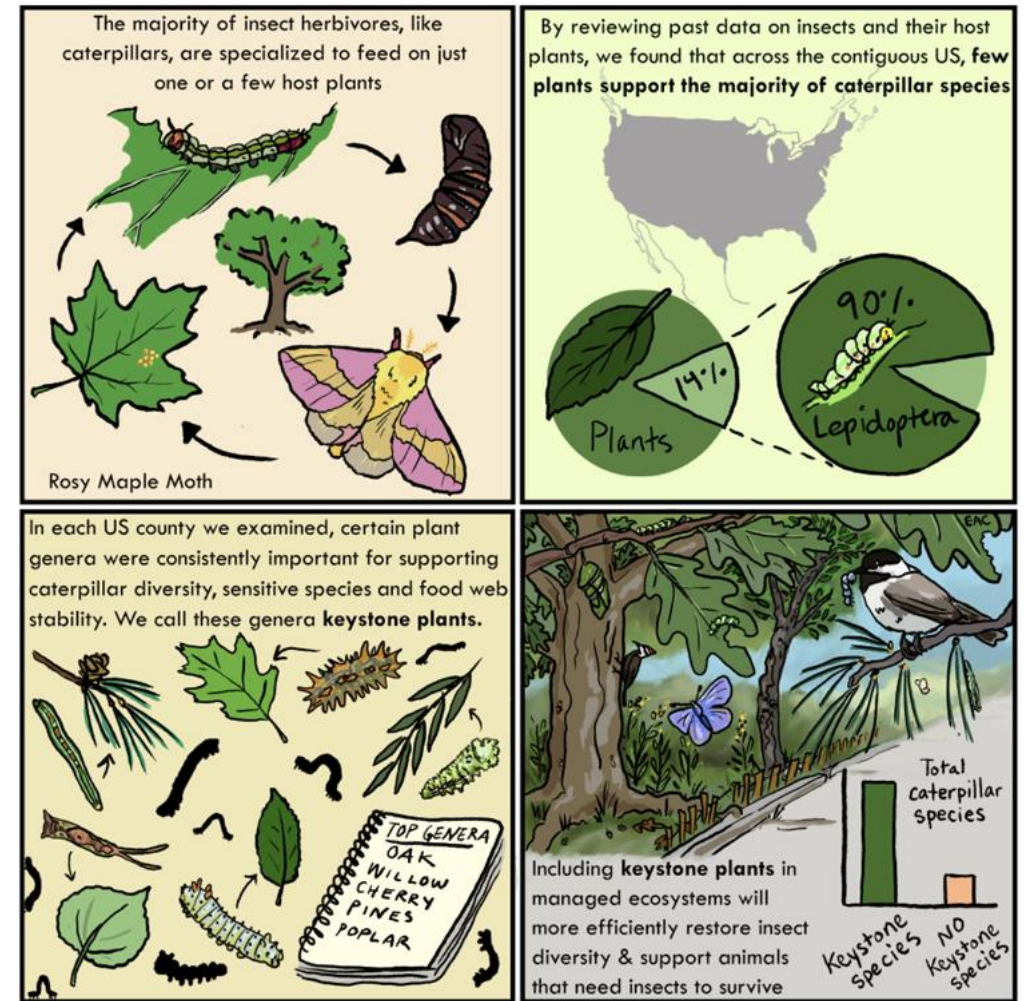
- 5% of native plants yet they **host**
- 75% of our caterpillars.

The top keystone species are:

- oaks (host over 500 species of caterpillars),
- willows, birch, poplars, cherries, maples.

WHAT ARE KEYSTONE PLANTS?

Keystone plants are native plants that support a significant number of caterpillars (butterfly and moth larvae). Planting keystone plants helps build complex food webs by forming the essential foundation — native plants and insects — that provide food for other organisms, directly and indirectly.



Narango, D.L., Tallamy, D.W. and Shropshire, K. J. 2020. Few keystone plant genera support the majority of Lepidoptera diversity. Nature Communications
Access the paper here: <https://rdcu.be/caKj5>



@DLNarango
Share your gardens!
#plantsforwildlife

Art: Elsa Cousins

7. Create soft landings under trees

This allows insects to complete their development

Insects have 4 life stages—egg, larvae, pupae, and adult.
Caterpillars drop beneath trees to pupate.

Replace lawn under trees with groundcovers or shrubs

SOFT LANDINGS

Soft landings are diverse native plantings under keystone trees (or any other regionally appropriate native tree). These plantings provide critical shelter and habitat for one or more life cycle stages of moths, butterflies, and beneficial insects such as bumble bees, fireflies, lacewings, and beetles. In addition to plants, **soft landings** also include leaf litter, duff, and plant debris.

The infographic is divided into four panels. The top-left panel shows a tree with a notebook listing 'TOP GENERA: OAK, WILLOW, CHERRY, PINES, POPLAR'. Various moths are labeled: Red-banded hairstreak, Luna moth, Great oak dagger moth, and Eastern buck moth. The top-right panel shows a cross-section of the ground under a tree with leaf litter, containing pupae and larvae. Moths labeled include Blinded sphinx moth, Juvenal's duskywing, and Hag moth. The bottom-left panel shows a tree with a white picket fence in the background. Moths labeled include Skiff moth, Edwards' hairstreak, and Pink-striped oakworm. The bottom-right panel shows a red X over a lawnmower and a black landscape fabric, indicating they are discouraged. Text in this panel says 'Planting intentional soft landings* under keystone trees builds healthy soil, provides food for songbirds and pollinators, sequesters more carbon than turf grass, and reduces time spent mowing.' Below this, it says 'Other ways to support insects that spend a phase of their life cycle beneath trees include eliminating landscape fabric and decreasing mowing to reduce soil compaction.'

Oaks are universally the top keystone trees that support moths and butterflies. Across the United States, more than 940 types of caterpillars feed on oaks (*Quercus*).

Many of the moths and butterflies that feed on oak trees must complete their life cycles in the duff and leaf litter (i.e., **soft landings***) near or beneath the tree, or below ground.

Creating **soft landings*** under the dripline of oaks (as well as any other tree) invites all kinds of beneficial insects to complete their life cycles in your yard.

Planting intentional **soft landings*** under keystone trees builds healthy soil, provides food for songbirds and pollinators, sequesters more carbon than turf grass, and reduces time spent mowing.

A number of beneficial insects such as fireflies, bumble bees, beetles, and lacewings need soft landings to survive.

Other ways to support insects that spend a phase of their life cycle beneath trees include eliminating landscape fabric and decreasing mowing to reduce soil compaction.

One other thing-
initiated the research

A ratio of 70% native plants in the landscape
is enough to sustain insect pollinators

This is important because-



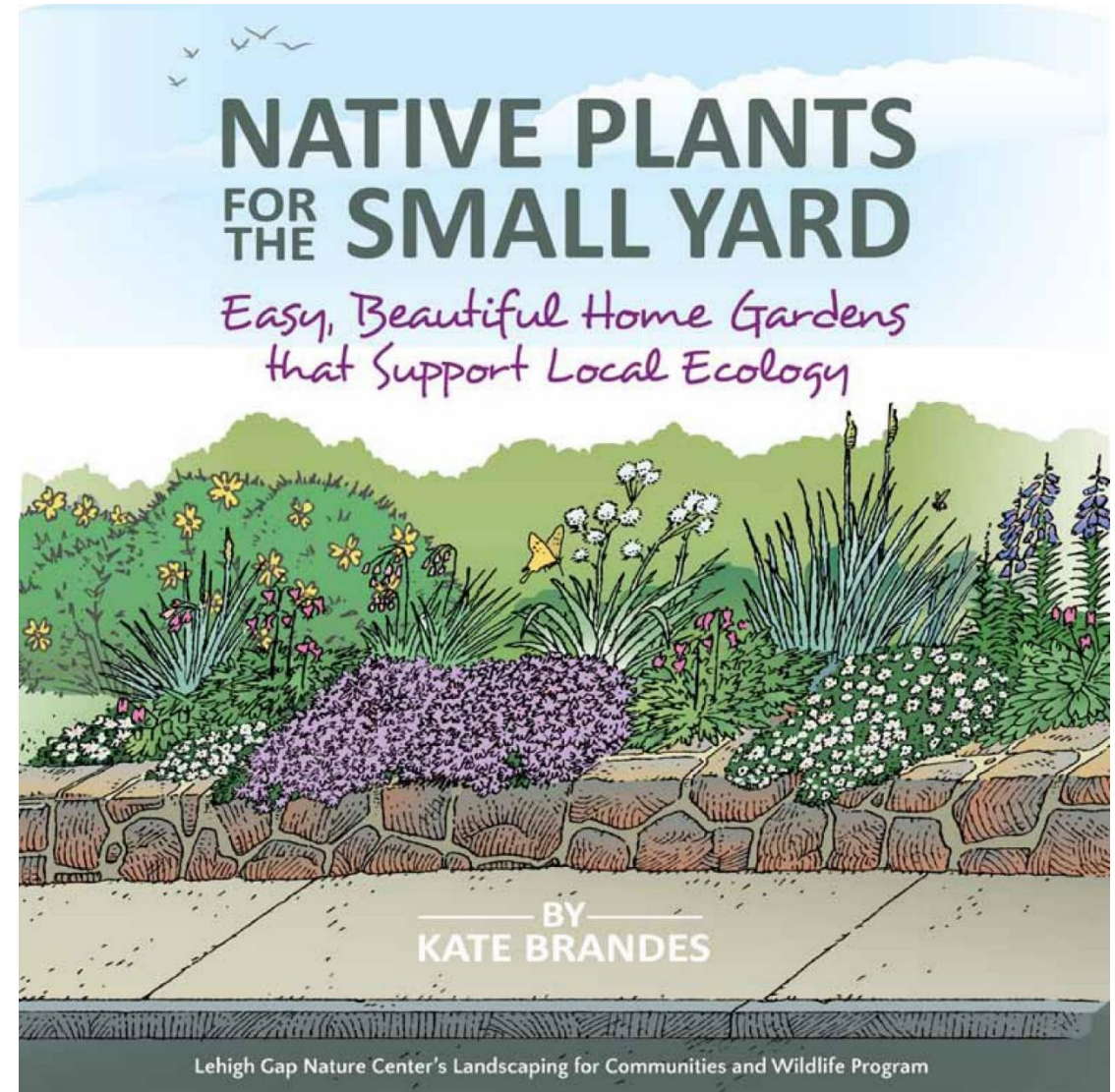
Evolve Your Lawn –

Start with a **small** garden project

9 Design templates from the booklet—

- Corner Garden
- Small Water Feature
- Container** Garden
- Sidewalk Strip Garden
- Downspout Garden
- Rock Wall Garden
- Mailbox** Garden
- Front **Porch** Garden
- Back Patio Garden

Designs have a range of conditions
from sunny to shady and wet to dry.



Right Plant – Right Place

Match the plant to the conditions.

Do not change the conditions to match the plant.

Like Mother Nature

What are your site conditions?

Copyrighted Material


Right Plant, Right Place

The Indispensable Guide to the Successful Garden
NICOLA FERGUSON

THE unique reference book that will lead gardeners effortlessly to the plants that will look best and grow best in their own particular garden. Over 1,500 garden plants are systematically organized according to growing conditions, purpose and appearance.

American Editor: Fred McGourty, Brooklyn Botanic Gardens

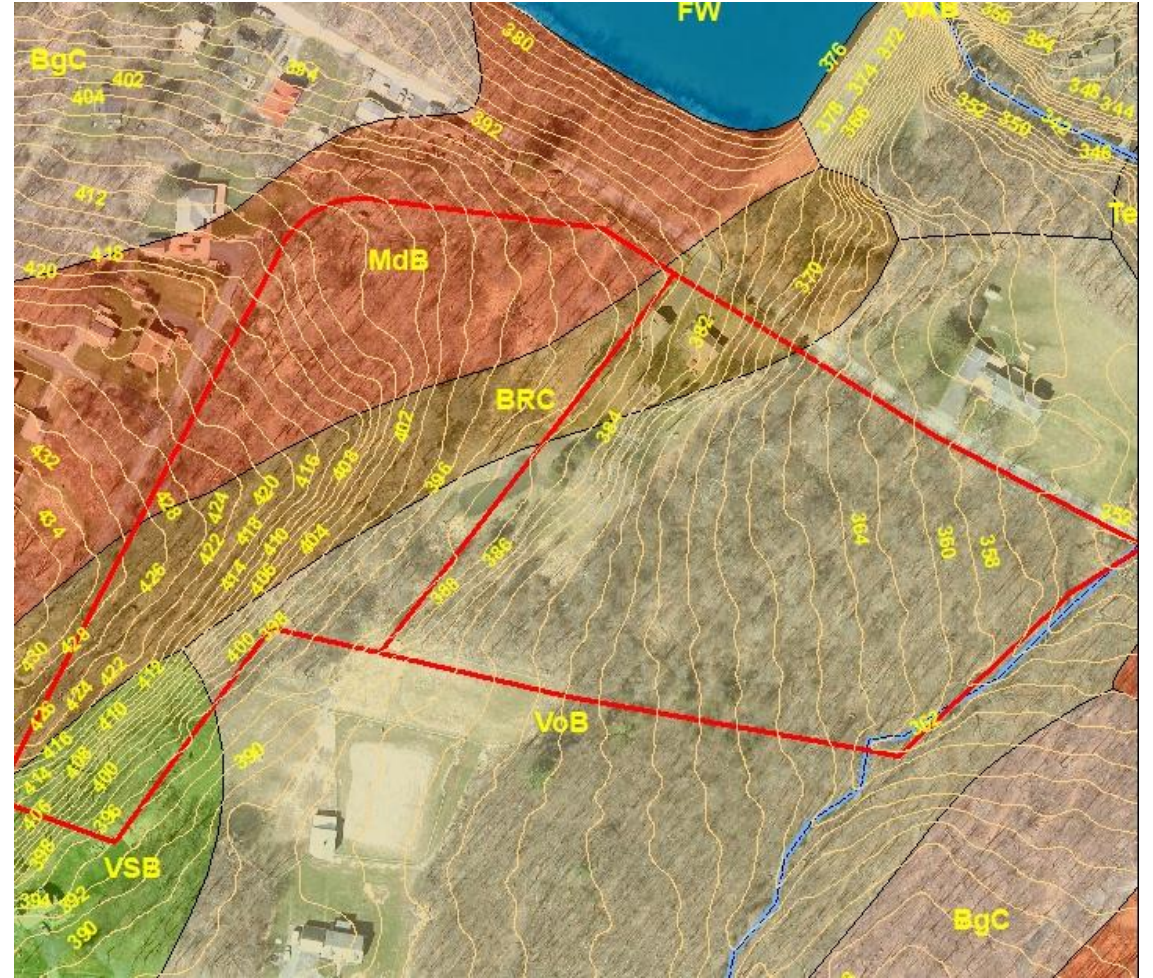
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Suitable for acid soils—Camellia
Tolerant of dry shade—Greater Periwinkle
Hedging plants—Ceanothus
Clearing plants—Black-eyed Susan
Flowers in winter—Hesperis
Suitable for ground cover—Daphne

Site Analysis

- Existing conditions, sun, water, soil, plants
Designers are trained
Seems daunting
But homeowners already know
plants-harder to know
- First step to understanding your property
- Benefit of joining the WVPP
people want to know their property



Ulster County Parcel Viewer

- Tool for map users
- Lots of online property info
soils, wetlands, geology
- 2021 aerial view—high resolution

The screenshot displays the Ulster County Parcel Viewer web application. At the top, the title "ULSTER COUNTY PARCEL VIEWER" is shown next to the Ulster County seal. Below the title is a search bar with the placeholder text "search for an owner, SBL or address" and a "Search" button. The main interface is divided into a left sidebar and a main map area. The sidebar contains a "Basemaps" section with a grid of thumbnail images and labels for various map layers: "Ulster County Parcels", "2021 Aerials", "2021 Aerials Infrared", "2016 Aerials", "2016 Aerials Infrared", "2013 Aerials", "2013 Aerials Infrared", "2009 Aerials", "2009 Aerials Infrared", and "2004 Aerials". Below the basemaps are three expandable sections: "Map Layers", "Measurements & Coordinates", and "Parcel Details". The main map area shows a high-resolution aerial view of a residential property with a large house and a driveway. The map is overlaid with parcel boundaries and soil type labels such as "CaC", "CvB", and "CaB". Navigation controls, including a zoom-in (+) and zoom-out (-) button, are visible in the top-left corner of the map area.

Container Garden

Can support pollinators

Three types or sizes: tall, filler, spiller
one species per type

Only two conditions: sunny or shady
no distinction for wet or dry

Plant alternatives
several options for each condition

Helpful hints:

- Containers are often planted with a tall plant, a plant that fills the pot and one that spills over the brim. These varying heights are attractive, but you can also use a single plant for good effect.
- Pots should have drainage holes in the bottom, be deep enough for root growth, and wide enough so that plants aren't crowded.
- Large pots work best, but make sure they aren't too heavy. Add wheels to pots to be able to move them around easily.

CONDITIONS:

more sun

34 in. diameter

more shade

34 in. diameter

Color palette:

Color palette:

PLANTS:

<p>Spilling: Barren strawberry <i>(Waldsteinia fragarioides)</i> Wine cups <i>(Callirhoe involucrata)</i></p>	<p>Filler: Pink coreopsis <i>(Coreopsis rosea)</i> Alumroot <i>(Heuchera americana)</i></p>	<p>Tall: Little blue stem <i>(Schizachyrium scoparium)</i> Ostrich fern <i>(Matteuccia struthiopteris)</i></p>
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Little bluestem

Pink coreopsis

Barren strawberry

PLANT ALTERNATIVES:

(use alone or in combination)

more sun

Filler/Spilling:

- Prairie dropseed (*Sporobolus heterolepis*)
- Prickly pear cactus (*Opuntia compressa*)

Filler:

- Nodding onion (*Allium cernuum*)
- Dwarf crested iris (*Iris cristata*)
- Snow flurry aster (*Symphyotrichum ericoides*)

Tall:

- Black-eyed susan (*Rudbeckia fulgida*)
- Spotted beebalm (*Monarda punctata*)
- Penstemon (*Penstemon digitalis*)
- Garden phlox (*Phlox paniculata*)
- Little lemon goldenrod (*Solidago 'Little Lemon'*)

more shade

Filler/Spilling:

- Moss phlox (*Phlox subulata*)
- Prickly pear cactus (*Opuntia compressa*)

Filler:

- Maidenhair fern (*Adiantum pedatum*)
- Stonecrop (*Sedum ternatum*)
- Most heucheras

Tall:

- Bottlebrush grass (*Elymus hystrix*)

Container Garden - 2

Natives are perennials, not annuals
Focus on foliage, then flowers
Search images using scientific name

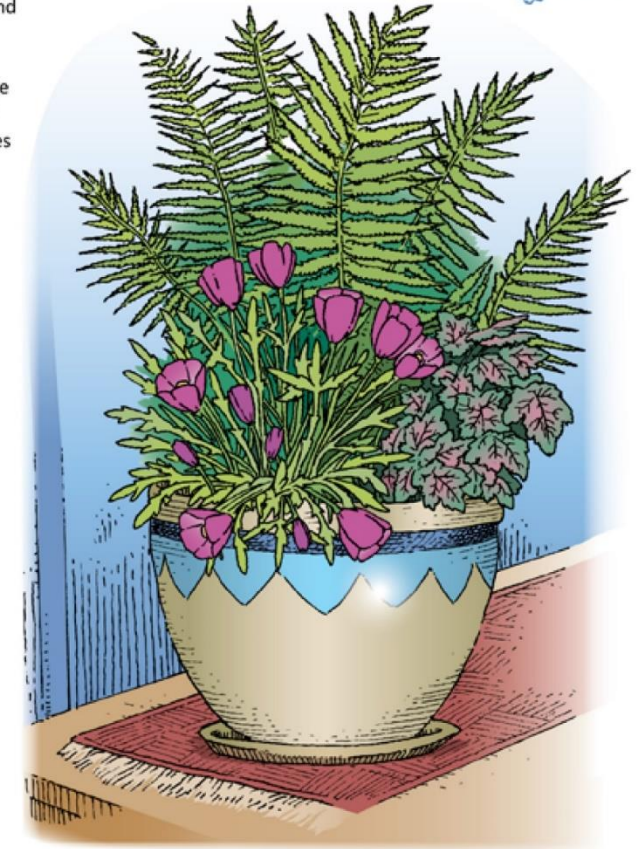
Try out in containers first
Move on to larger project

DESIGN TEMPLATES

CONTAINER GARDEN

A container garden can instantly add interest to any outdoor space.

Container gardens are versatile for small yards, patios, decks and porches. They can be placed alone or in groups. Arrange containers close to your favorite outdoor spot so you can enjoy them. The color pallet of natives is often more subtle, like that found in nature. So it's easy to mix things together and have them look good.



Mailbox Garden

45 square feet vs. 7 sf

More public exposure –
get neighbors on board
counter negative perceptions
of neglected, messy

DESIGN TEMPLATES MAILBOX GARDEN

Dress up your mailbox with native perennials that will draw butterflies.



Mailbox Garden - 2

Three sizes again: tall, medium, short

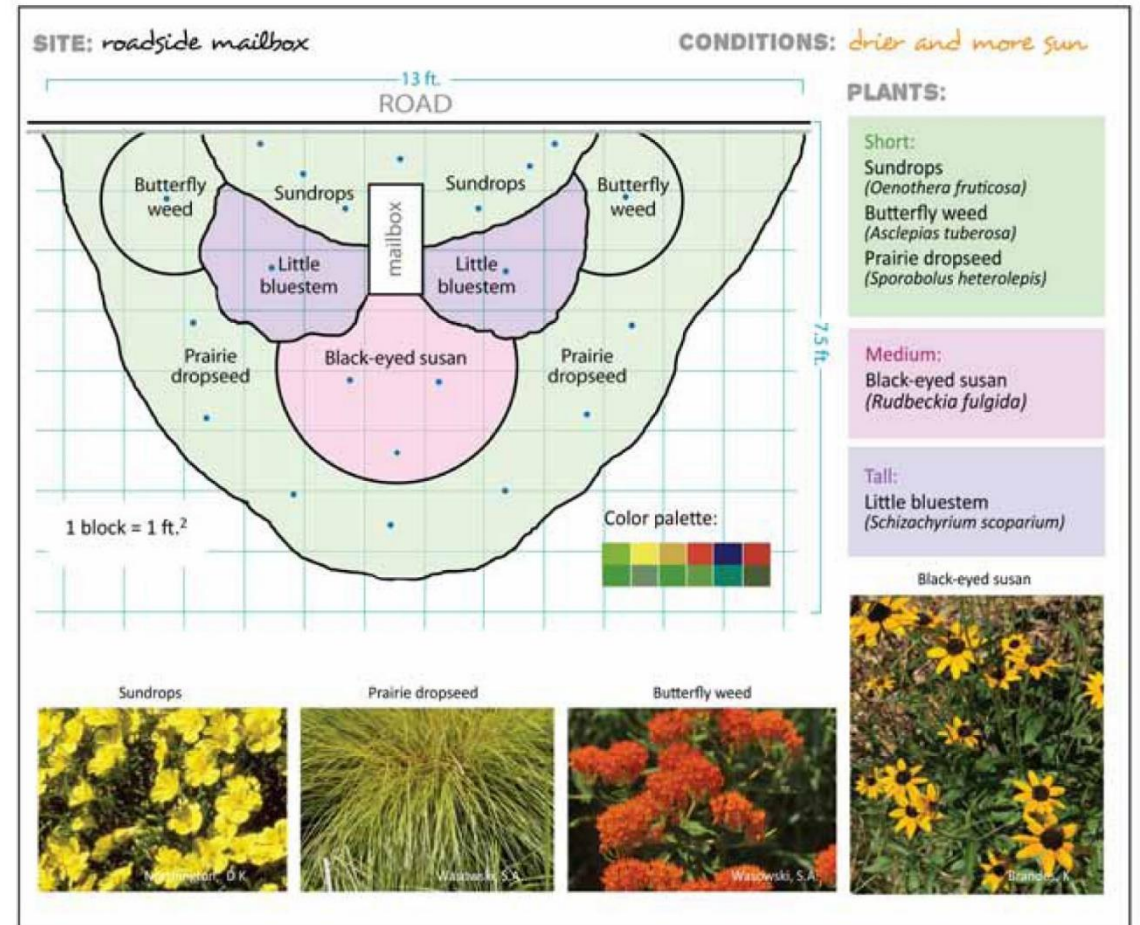
Four conditions:

- sunny dry or wet (sunny dry)
- shady dry or wet

Determine site conditions per analysis
determine plant selections

Helpful hints:

- Use plants that will tolerate and thrive in the conditions you have.
- Plant the big stuff first. Account for full size when planting and spacing. Then fill in with smaller plants.



Mailbox Garden - 3

Plant alternatives

several options for each condition
some plants are generalists

Try pocket garden first then
Go bigger & closer

DESIGN TEMPLATES MAILBOX GARDEN

PLANT ALTERNATIVES:

drier and more shade

Short:
Canada anemone
(*Anemone canadensis*)
Green and gold
(*Chrysogonum virginianum*)
Alumroot
(*Heuchera americana*)

Medium:
Golden Alexanders
(*Zizia aurea*)

Tall:
Sneezeweed
(*Helenium autumnale*)

Golden Alexanders



wetter and more shade

Short:
Maidenhair fern
(*Adiantum pedatum*)
Canada anemone
(*Anemone canadensis*)
Foam flower
(*Tiarella cordifolia*)

Medium:
Lady fern
(*Athyrium filix-femina*)
Royal fern
(*Osmunda regalis*)
Golden Alexanders
(*Zizia aurea*)

Tall:
Sneezeweed
(*Helenium autumnale*)

Swallowtail Butterfly



wetter and more sun

Short:
Canada anemone
(*Anemone canadensis*)
Pink Coreopsis
(*Coreopsis rosea*)
Wild geranium
(*Geranium maculatum*)

Medium:
Golden Alexanders
(*Zizia aurea*)

Tall:
Blazing Star
(*Liatris spicata*)
Garden Phlox
(*Phlox paniculata*)

Purple Blazing Star



Front Porch Garden

Foundation garden—against house
In your view - appreciated
Maintained

200 square feet - 45 sf - 7 sf

DESIGN TEMPLATES

FRONT PORCH GARDEN

Gardens in the front of the house are often the ones we want looking the best since they are what most people see. Native plants can enhance the beauty of your home and landscaping.



Front Porch Garden - 2

Three sizes again: tall, medium, short

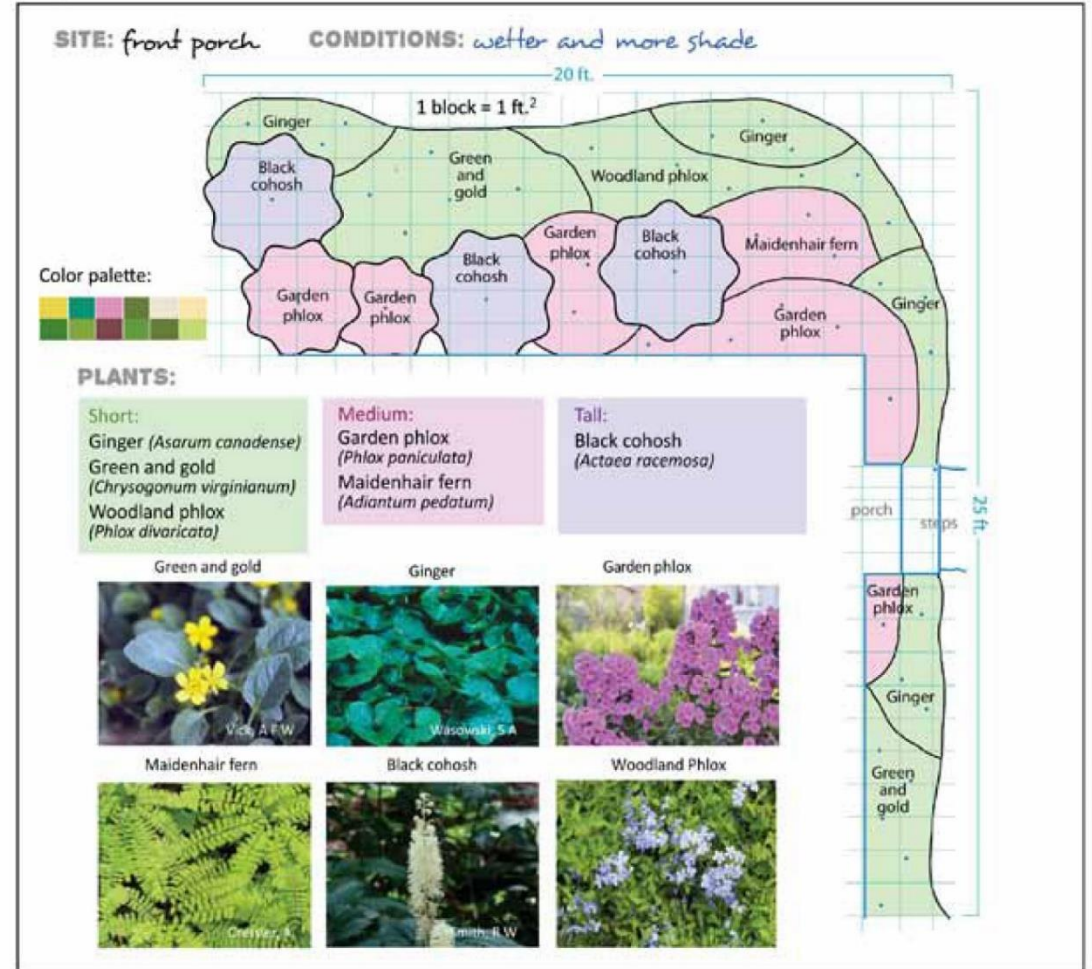
Four conditions:
shady dry or wet (shady wet)
sunny dry or wet

Determine site conditions per analysis
Larger gardens may have different conditions

DESIGN TEMPLATES

FRONT PORCH GARDEN

Helpful hint: - Use plants that aren't so tall that they obscure the view from your porch.



Front Porch Garden - 3

Plant alternatives

several options for each condition
some plants are generalists

Perennial garden but-

larger gardens handle shrubs
small shrub in medium group.

PLANT ALTERNATIVES:

drier and more shade

Short:
Canada anemone
(*Anemone canadensis*)
Green and gold
(*Chrysogonum virginianum*)
Alumroot
(*Heuchera americana*)
Allegheny pachysandra
(*Pachysandra procumbens*)

Medium:
Bottlebrush Grass
(*Elymus hystrix*)

Tall:
Sneezeweed
(*Helenium autumnale*)

Bottlebrush Grass



drier and more sun

Short:
Nodding onion
(*Allium cernuum*)
Butterfly weed
(*Asclepias tuberosa*)
Threadleaf coreopsis
(*Coreopsis verticillata*)
Alumroot
(*Heuchera americana*)
Sundrops
(*Oenothera fruticosa*)

Medium:
New Jersey tea (small shrub)
(*Ceanothus americanus*)
Sweet fern
(*Comptonia peregrina*)
Blue star amsonia
(*Amsonia hubrichtii*)
Beardtongue penstemon
(*Penstemon digitalis*)

Tall:
Anise hyssop
(*Agastache foeniculum*)
Blue false indigo
(*Baptisia australis*)
Grey-headed coneflower
(*Ratibida pinnata*)
Little bluestem
(*Schizachyrium scoparium*)

wetter and more sun

Short:
Canada anemone
(*Anemone canadensis*)
Pink Coreopsis
(*Coreopsis rosea*)
Wild geranium
(*Geranium maculatum*)

Medium:
Dwarf fothergilla (small shrub)
(*Fothergilla gardenii*)
Meadowsweet
(*Spiraea alba*)
Swamp milkweed
(*Asclepias incarnata*)
Great blue lobelia
(*Lobelia siphilitica*)

Tall:
Beebalm
(*Monarda didyma*)
Cardinal flower
(*Lobelia cardinalis*)

Dwarf fothergilla



Adjustments to design templates

Great starter designs—
everything can be improved

Too many species listed in alternatives
limit—one tall, six total
too busy, lose legibility

Diversity is good
not a meadow
cottage gardens are difficult

PLANT ALTERNATIVES:

drier and more shade

Short:
Canada anemone
(*Anemone canadensis*)
Green and gold
(*Chrysogonum virginianum*)
Alumroot
(*Heuchera americana*)
Allegheny pachysandra
(*Pachysandra procumbens*)

Medium:
Bottlebrush Grass
(*Elymus hystrix*)

Tall:
Sneezeweed
(*Helenium autumnale*)

Bottlebrush Grass



drier and more sun

Short:
Nodding onion
(*Allium cernuum*)
Butterfly weed
(*Asclepias tuberosa*)
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Grey-headed coneflower
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Little bluestem
(*Schizachyrium scoparium*)

wetter and more sun

Short:
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Meadowsweet
(*Spiraea alba*)
Swamp milkweed
(*Asclepias incarnata*)
Great blue lobelia
(*Lobelia siphilitica*)

Tall:
Beebalm
(*Monarda didyma*)
Cardinal flower
(*Lobelia cardinalis*)

Dwarf fothergilla



Adjustments to design templates – 2

Plant spacing – needs to be closer

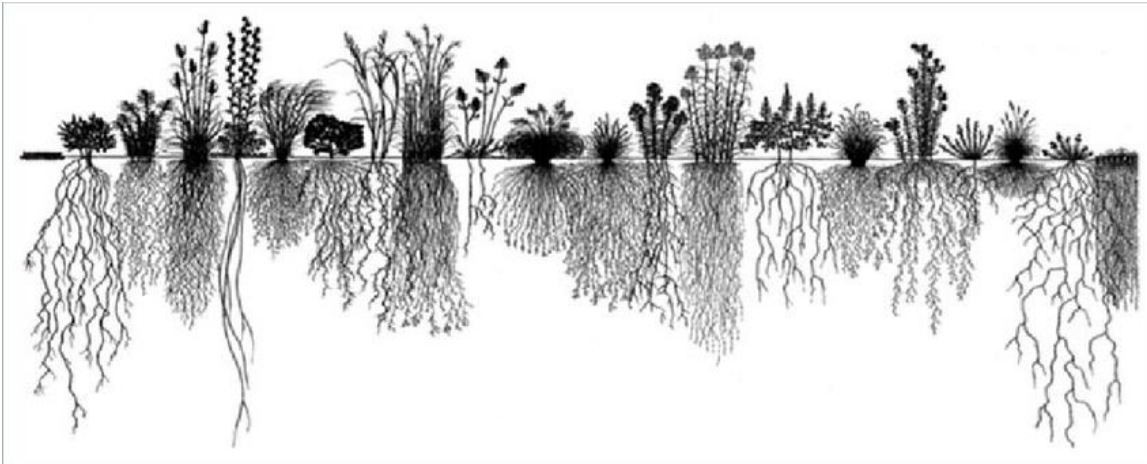
Grid shows 2 feet apart

Plants should be about 1 foot on center

Check North Creek Nursery for spacing

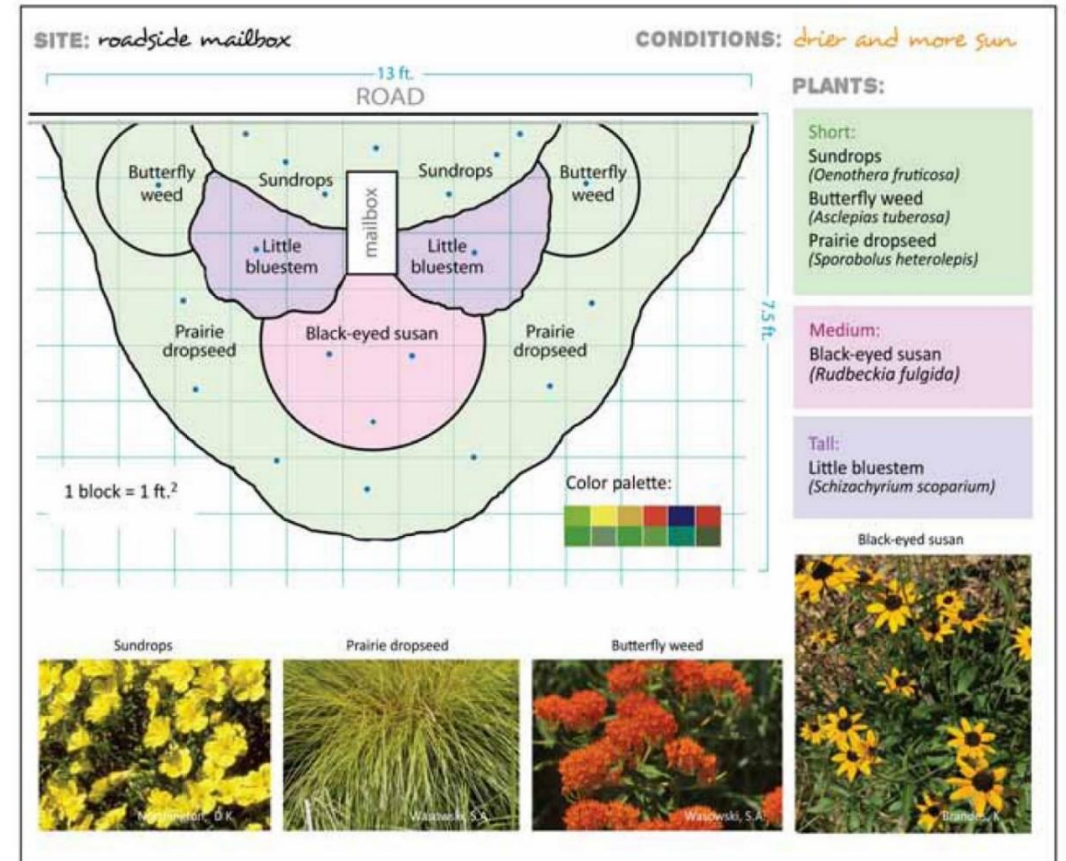
Closer spacing suppresses weeds

plants knit together above & below ground



Helpful hints:

- Use plants that will tolerate and thrive in the conditions you have.
- Plant the big stuff first. Account for full size when planting and spacing. Then fill in with smaller plants.



Adjustments to design templates – 3

Don't use aggressive plants in gardens

Anemone canadensis

Good for edging, monocultures

Plant lists in booklet

Good but may be difficult to use

Providing list of native perennials

Includes size & conditions

Match to designs



List of Native Perennials

	A	B	C	D	E	F	G	H
1	Scientific Name	Common Name	Height	Moisture	Sun	Bloom season	Color	Comments
2								
3	Amsonia 'Blue Ice'	Blue Ice	1-1.5 feet	moist-dry	full - part-shade	May	blue	compact for edging *
4	<i>Aquilegia canadensis</i>	Columbine	2 feet	moist-dry	full - shade	Ap, May, June	red	sandy area @ dining
5	<i>Asclepias incarnata</i>	Swamp Milkweed	2-4 feet	wet-moist	full - lt shade	summer	white and pink	
6	<i>Asclepias tuberosa</i>	Butterfly Weed	1-3 feet	avg-dry (DT)	full - part	summer	orange	
7	<i>Aster (Symphyotrichum oblongifolium)</i>	Aromatic Aster	2 feet	dry to med	full -	Sept-Oct	violet - blue	
8	<i>Aster laevis</i>	Smooth Aster	1-3 feet	moist-dry	full - part	fall	violet	
9	<i>Aster novae-angliae</i>	New England Aster	2-6 feet	moist	full - part	fall	violet - purple	
10	<i>Baptisia australis</i>	Blue False Indigo	3-4 feet	moist-dry	full - part	spring	violet - blue	
11	<i>Chelone glabra</i>	White Turtlehead	3 feet	wet-moist	full - part	late summer-fall	white	
12	<i>Chrysogonum virginianum</i>	Golden Star/Green & Gold	6-12 inch	moist-dry	part - shade	May - Oct	yellow	groundcover, banks
13	<i>Coreopsis verticillata</i>	Threadleaf Tickseed	1-2 feet	moist-dry	full - part	summer	light yellow	(NJ)*
14	<i>Echinacea purpurea</i>	Purple Coneflower	2-3 feet	moist	full - part	summer	rose	
15	<i>Eupatorium dubium 'Little Joe'</i>		3-4 feet		sun - part	July - Sept	mauve	*
16	<i>Eupatorium fistulosum</i>	Hollow-stemmed JP Weed	3-8 feet	wet-moist	full - part	late summer	mauve	
17	<i>Eupatorium maculatum</i>	Spotted Joe Pye Weed	3-9 feet	moist	full - part	late summer	mauve	dramatic
18	<i>Geum fragarioides (Waldesteinia)</i>	Barren Strawberry	3-6 inch	moist-dry	full - shade	April-May	yellow	evergreen groundcover
19	<i>Helianthus divaricatus</i>	Woodland Sunflower	4 feet	moist - dry	part - shade	Jul, Aug, Sept	yellow	aggressive, rhizo
20	<i>Heuchera americana</i>	Alumroot	1-2 feet	moist-dry	full - lt shade	early summer	cream	check species
21	<i>Iris cristata</i>	Crested Iris	8 inches	moist	full - shade	April-May	violet	groundcover (PA)*
22	<i>Iris versicolor</i>	Blue Flag	3-4 feet	wet-moist	full - lt shade	late spring	blue-violet	wetland garden
23	<i>Liatris scariosa</i>	Northern Blazing star	2-4 feet	dry	full	summer	pink-purple	
24	<i>Liatris spicata</i>	Gayfeather, Marsh Blazing Star	2-4 feet	wet-moist	full - part	July - Aug	pink-purple	wetland & average soil
25	<i>Lilium philadelphicum</i>	Wood Lily	1 foot	moist-dry	full - part	July, Aug	orange	
26	<i>Lilium superbum</i>	Turk's Cap Lily	3-8 feet	wet-moist	full - part	summer	red-orange	
27	<i>Lobelia cardinalis</i>	Cardinal Flower	2-4 feet	wet-moist	full - lt shade	July-Sept	crimson	needs disturbance
28	<i>Lobelia siphilitica</i>	Great Blue Lobelia	2-3 feet	wet-moist	full - part	late summer	blue	
29	<i>Lupinus perennis</i>	Sundial Lupine	1-2 feet	avg-dry (DT)	full - part	May-June-July	blue-violet	short-lived, self-sows
30	<i>Maianthemum racemosum</i>	False Solomon's Seal	1-3 feet	moist	full - shade	April, May, June	white	rhizotomous
31	<i>Mertensia virginica</i>	Virginia Bluebells	1-2 feet	moist (spring)	part - shade	April	pink to blue	
32	<i>Monarda didyma</i>	Bee Balm, Oswego Tea	3-4 feet	moist	full - lt shade	summer	scarlet	
33	<i>Monarda fistulosa</i>	Wild Bergamot	3-4 feet	moist	full - lt shade	summer	violet	aggressive
34	<i>Monarda punctata</i>	Dotted Mint	24-30 inches	avg-dry (DT)	full - lt shade	July, Aug, Sept	purple	
35	<i>Opuntia humifusa</i>	Eastern prickly pear	6 inches	dry	full - part	June, July	yellow	
36	<i>Packera obovata</i>	Roundleaf ragwort	6-18 inches	well-drain	sun - shade	May - June	yellow	
37	<i>Penstemon digitalis</i>	Foxglove Beardtongue	2-4 feet	moist	full - lt shade	spring	white	
38	<i>Penstemon hirsutus</i>	Hairy Beardtongue	12-18 inches	moist-dry	full - part	early summer	violet	
39	<i>Phlox divaricata</i>	Wild Blue Phlox	1 foot	moist	part - shade	May	blue-violet	ephemeral, part die-back

In Conclusion – Ways to Get Started

Join the Walkkill Valley Pollinator Pathway

Gardiner Library's

Garden planting (May 13th or 14th)

Native plant sale (May 21st)

Take one or more of these steps

- 1- Plant native
- 2- Remove invasive plants
- 3- Avoid pesticides
- 4- Reduce the lawn
- 5- Turn out lights
- 6- Plant keystone species
- 7- Create soft landings

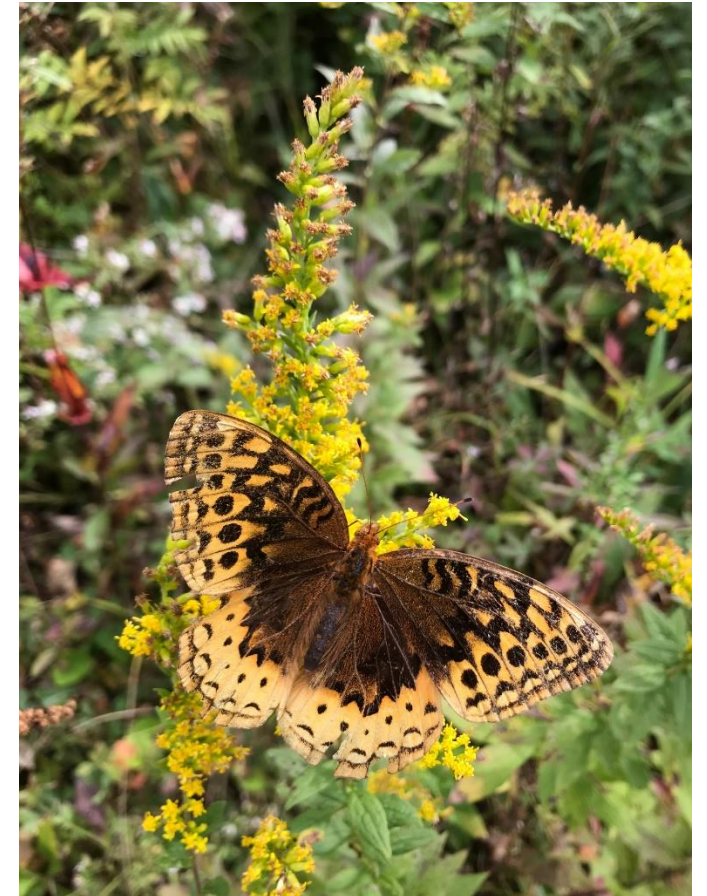
Plant a native garden from the design book

Read articles & watch webinars – from the resource list

Hands-on workshops coming up

-Winter seed planting at Library (January 14, 2023)

-Seed collecting at Library (October & November 2022)



Resources

Planting Guides

- Design Booklet—*Native Plants for the Small Yard* (pdf)
(<https://www.pollinator-pathway.org/native-garden-designs>)
- List of Native Perennials (spreadsheet)

Wallkill Valley Pollinator Pathway (<https://wallkillvalleylt.org/pp/>)

Ecological Gardening and Native Plant Organizations

(check out these websites and join their mailing lists)

- Northeast Pollinator Pathway (<https://www.pollinator-pathway.org/>)
- Woodstock Pollinator Pathway (<https://woodstocknypollinatorpathway.org/>)
- Healthy Yards** (<https://www.healthyyards.org/>)
- Ecological Landscaping Association** (<https://www.ecolandscaping.org/>)
- The Wild Seed Project** (<https://wildseedproject.net/>)
- Wild Ones (<https://wildones.org/>)
- Xerces Society (<https://www.xerces.org/>)
- Homegrown National Park (Doug Tallamy) (<https://homegrownnationalpark.org/>)

Resources - 2

Native Plant Sources-Seeds

- Prairie Moon Nursery (<https://www.prairiemoon.com/>)
- Prairie Nursery (<https://www.prairienursery.com/>)
- Wild Seed Project (<https://wildseedproject.net/>)

Native Plant Sources-Plants

- Catskill Native Nursery (local) – They’re hiring!
- Prairie Moon & Prairie Nursery sell small & bare root plants
- Small local nurseries—ask about natives (not big box)

Plant Identification

- Apps (can make mistakes): Seek (Free); PictureThis (\$30)
- Books: *Newcomb’s Wildflowers*, *Weeds of the Northeast*

What’s native here?

- USDA plants database (<https://plants.usda.gov/home>)
- NYS Flora (<https://newyork.plantatlas.usf.edu/>)
- NWF Plantfinder (<https://www.nwf.org/nativeplantfinder/>)

What’s invasive in New York?

- NYS Invasive plants (https://www.dec.ny.gov/docs/lands_forests_pdf/isprohibitedplants2.pdf)

Ulster County Parcel Viewer (<https://ulstercountyny.gov/maps/parcel-viewer/?>)

Thank You

Gardiner Library and Gardiner ECC

For hosting this event -
and for all your help

And thanks to all of you for joining us!



If you have any questions,
please feel free to contact me.

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