Increasing Bio Diversity From Lawn to Meadow

HAH Roundtable, March 5, 2022

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The Lawn – a Brief History

- Closely shorn grass lawns "green carpets" first appeared in England and France in the late 16th Century at the homes of large, wealthy landowners
  - Replacing agricultural land / sheep meadows around the house (estate)
  - Demonstrating wealth and status
- Lawn mowers . . .
  - 1830 First mower introduced by Edwin Budding
  - 1870 First human pushed mower
  - 1921 First gas powered mover
  - 1938 Toro launches a power mower
- Lawns come to America
  - Bowling, Golf, Tennis, Parks, Estates
  - Rapidly expanding after WWII with the development of suburbs

A Brief History – continued

- Today
  - The most grown crop in the U.S.
  - 63,000 square miles = size of Texas
  - A $20B industry
- On Average, we . . .
  - Spend 70 hours / year on lawn care
  - Burn 800 million gallon of gas / year on lawn care
- Not native to America
  - Kentucky Blues - from Europe and Northern Asia
  - Bermudas – from Africa
  - Zoysias – from East Asia
- Thus, requiring
  - watering, fertilization, pesticides
  - None of it edible

Family moving into their new home in Levittown, NY. *Photo: TIME magazine*

Changing Ordinances

FROM . . .

- Southampton Village Code § 41-5**Duty of owner as to land abutting streets**
  - No owner of land fronting or abutting on a street or road in the Village of Southampton shall permit any growth of brush, grass or weeds to a greater height than five inches. . . Such brush, grass, weeds or rubbish shall be cut, trimmed or removed as often as may be necessary to comply with the foregoing provisions of this section. . . Failure to comply will . . .

To . . .

- Minnesota will Pay Homeowners to Make Their Lawns Bee-Friendly with Bee-Friendly Wildflowers, Native Grasses, and Clover
- The Peconic Estuary Partnership (PEP) will provide financial rewards for homeowners who remove turf and pavement, and add green alternatives to their properties that benefit the environment
  - www.peconicestuary.org/what-you-can-do/homeowner-rewards-program
- Similar legislation & ordinances are being introduced across the country to
  - Reduce water consumption and pollution, achieve sustainability goals, and to protect endangered species

Getting Started . . .

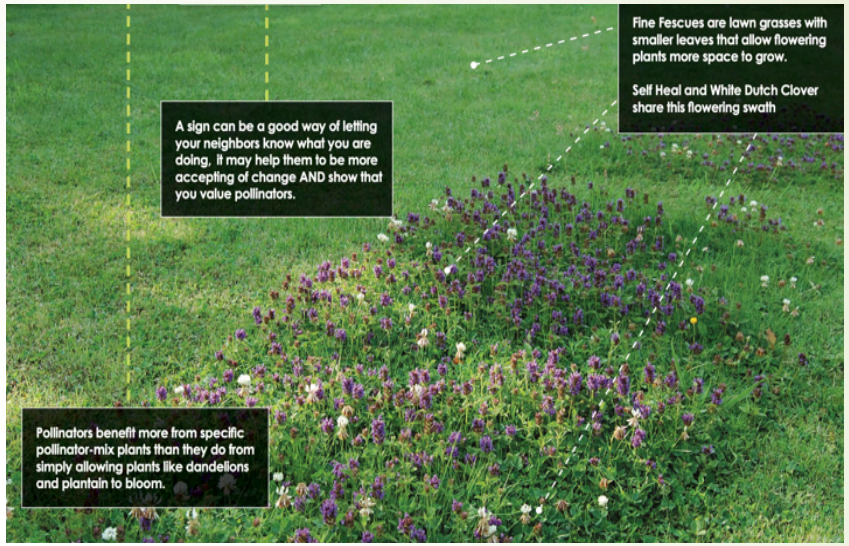
- Go Organic / Stop all pesticide use
  - www.xerces.org/pollinator-conservation/natural-lands
- Reduce mowing frequency
  - Bi-weekly / 3 - 4" tall
  - Video
- Dedicate less area to lawn
  - Plant diverse native plants
- Use lawn alternatives
  - Ground covers, native grasses,
- Be messy and provide habitat
  - Use mulch wisely / Allow bare soil to support ground nesting pollinators
  - Do fall clean up in the spring
- Manage and remove invasive and non-native species

December 2021

WHICH PROJECT IS RIGHT FOR YOU ?

Pocket garden / Border

Pollinator Lawn



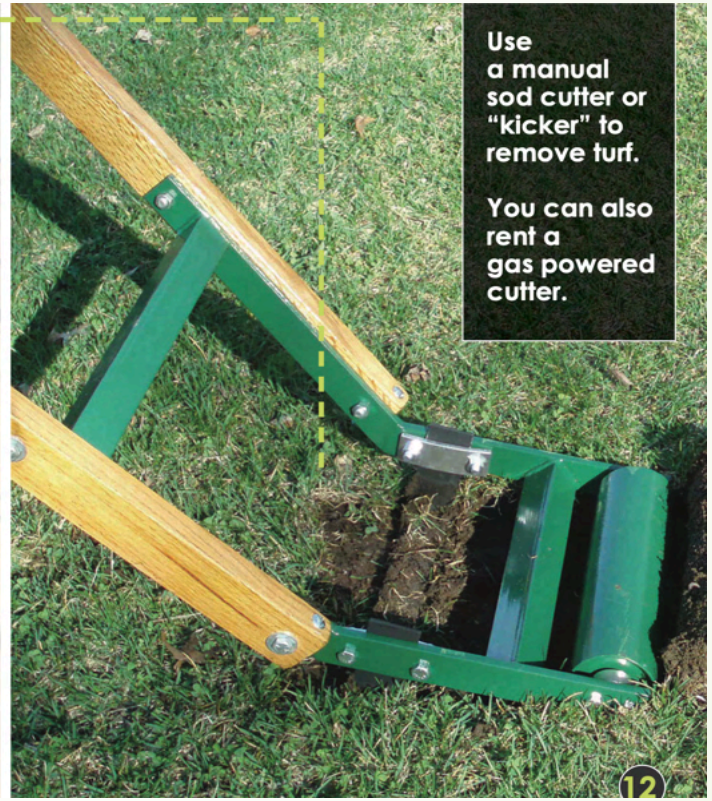
Flowering Tree / Shrubs

Pollinator Meadow

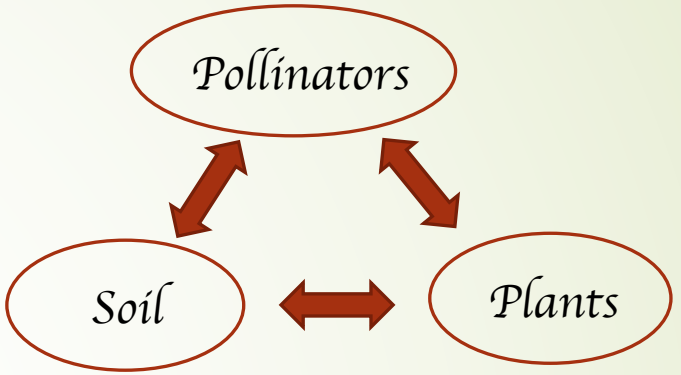
Design considerations

- Available space / Siting
  - Full and direct sun
  - Min. 3’ by 3’ clusters
  - Min. 3 different plants for each season (Spring / Summer / Fall)
- Pollinator Pathways
- Water source
  - Shallow basin with a few rocks as ‘resting place’
- Architectural features
- Reduced Light pollution
- Comfortable chair to observe and enjoy

Site Preparation



Plant Selection



- Consider keystone plants
  - Oaks support 557 species
- Select 'straight' Natives
  - 5% of native plants provide 75% of caterpillar food
  - 14% of native plants provide 90% of caterpillar food
  - Cultivars attract the more common pollinators
- How about 'less desirable plants' . . .
  - Clover, Dandelion, Dill, Parsley, Fennel,
- Start with Pollinators in mind
  - Endangered species
  - Which pollinators are you trying to attract
  - NYS Department of Environmental Conservation
    - www.dec.ny.gov/natureexplorer/app/location/town/results.7
  - NYS Pollinator Pathway
    - www.dec.ny.gov/docs/wildlife_pdf/pollinatorpathway.pdf
  - Xerces Society
    - www.xerces.org/sites/default/files/publications/21-038_02_Parks-Guidelines_web-screen.pdf


Natural Lawn Alternatives
Creeping Jenny
(Lysimachia nummularia)
Creeping Mazus
(Mazus reptans)
Creeping thyme
(Thymus serpyllum)
Clover
(Trifolium pratense)
Cedar sedge
(Carex planostachys)
Lily of the valley
(Convallaria majalis)
Treehugger

NYS Dept of Environmental Conservation

Criteria: Town: Southampton

Refine Search | Export Results | Create PDF Report

Showing 1 to 30 of 196 << < 1 2 3 4 5 6 7 > >>

Common Name / *Scientific Name*	Subgroup	Distribution Status	Year Last Documented	Protection Status: State	Protection Status: Federal	Conservation Rank: State	Conservation Rank: Global
Town: Southampton							
Animal: Birds							
Black Skimmer *(Rynchops niger)*	Gulls, Terns, Plovers, Shorebirds	Recently Confirmed	2007	Special Concern		S2	G5
Chuck-will's-widow *(Antrostomus carolinensis)*	Nightbirds	Recently Confirmed	2012	Protected Bird		S1B	G5
Forster's Tern *(Sterna forsteri)*	Gulls, Terns, Plovers, Shorebirds	Recently Confirmed	2003	Protected Bird		S1	G5
Glossy Ibis *(Plegadis falcinellus)*	Herons, Bitterns, Egrets, Pelicans	Recently Confirmed	2007	Protected Bird		S2	G5
Harlequin Duck *(Histrionicus histrionicus)*	Ducks, Geese, Waterfowl	Recently Confirmed	2018	Protected Bird		S1N	G4

NYS Pollinator Pathway

Chokeberry (*Aronia* spp)

White flowers in spring.
Height- 8’

Currant and Gooseberry (*Ribes* spp)

Late spring blooms, edible berries.
Height- 8’

Dogwood (*Cornus* spp)

White flowers in spring.
Height- 10’

Eastern Ninebark (*Physocarpus opulifolius*)

Attractive bark.
Height- 9’

Elderberry (*Sambucus canadensis*)

white blooms in early summer; edible fruit.
Height- 15’

Meadowsweet (*Spiraea alba*)

Blooms mid to late summer, white flowers. Height- 5’

Raspberry and Blackberry (*Rubus* spp)

Edible berries;.
Height- 6 -10’

What is a Pollinator Pathway ?

A Pollinator Pathway is a series of gardens with native plant species that form a distinctive vegetative path within an urban landscape that provides habitat for pollinators, while also reducing the susceptibility of the urban landscape to the introduction of invasive species (any non-native species that causes harm to the economy, environment and or human health).
You can help this project by planting pollinator friendly native species (some are showcased in this brochure) in your own garden! To participate contact the Pollinator Pathway Project Coordinators Below:

Project Coordinators:

Megan Pistolese: 315-387-3600 ext. 7724
megan.pistolese@tnc.org

Sue Gwise: 315-788-8450 ext. 243
Sjg42@cornell.edu

SLELO PRISM

St. Lawrence Eastern Lake Ontario Partnership for Regional Invasive Species Management

SLELO PRISM

Cornell University Cooperative Extension Jefferson County

Pollinator Pathway Project

SLELO PRISM

“Teaming up to stop the spread of invasive species”

Recommended Plants with High Value for Pollinators

This is not an exhaustive list—there are thousands of native North American plant species that provide resources and habitat for pollinators. This is a streamlined list intended as a starting point. Instead of listing particular species, we have listed the genera. Not all species in each genus are native to all regions. To learn more about identifying, sourcing and planting native plant species for your park or green space, we suggest reaching out to local ecologists and native plant societies and native plant and seed suppliers (see the sections and links on the previous page). Plant names follow the USDA–NRCS PLANTS database (plants.usda.gov).

Additional Plant Features

- ★ **POLLINATOR "SUPERFOODS"**—Certain native plants are known to provide exceptional forage for a wide variety of bees and other pollinators, including monarchs. See table below for a list of some of these plants.
- **FOOD FOR SPECIALIST BEES**—Many native bees are "specialists," only collecting pollen and other resorces from specific plants. See table below for a list of plants known to provide food for a number of specialist bees.
- **LEPIDOPTERA HOST PLANTS**—The caterpillars of many butterflies and moths can only feed on specific plants. For example, great spangled fritillary larvae only feed on violet leaves. Some plants support an amazing diversity of lepidoptera; e.g., oaks support hundreds of butterflies and moths species. Since most native plants support at least one butterfly or moth, we use for a genus supports over five species ***OR*** one species that doesn't eat anything else.
- **BEE NESTING PLANT**—These plants are utilized by native bees that nest in cavities or tunnels, either as nesting structure (pithy-stemmed plants, etc.) or as a source for nesting materials like leaves, flower petals, or fiber.
- **MONARCH NECTAR PLANT**—Certain members of these genera have been documented as extremely attractive to adult monarch butterflies.
- ✓ Plants in this group are native to, or suitable for, the region.

SCIENTIFIC NAME	COMMON NAME	FORM†	FEATURES	1 Maritime Northwest	2 Inland Northwest	3 California	4 Southwest	5 Intermountain West	6 Northern Plains	7 Southern Plains	8 Midwest	9 Great Lakes	10 Northeast	11 Mid-Atlantic	12 Southeast	13 Florida
Abronia	Sand verbena			✓	✓	✓	✓	✓								
Acer	Maple			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Achillea	Yarrow			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Aesculus	Chestnut					✓				✓	✓				✓	✓
Agastache	Giant hyssop			✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		
Ageratina	Snakeroot				✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Amelanchier	Serviceberry			✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	
Amorpha[1]	Leadplant; false indigo					✓	✓		✓	✓	✓	✓		✓	✓	✓
Andropogon	Bluestem					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Apocynum	Dogbane			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Aquilegia	Columbine			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Arctostaphylos	Manzanita			✓	✓	✓	✓	✓	✓			✓	✓			
Artemisia[2]	Wormwood				✓	✓	✓	✓	✓	✓	✓	✓				
Asclepias	Milkweed				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

KEY FORM†: Herbaceous, Woody, Graminoid — FEATURES‡: Pollinator "superfood" (★), Specialist bee plant, Host plant, Nesting plant, Monarch nectar plant — ‡See Additional Plant Features on p. 86 for more information

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Source: Xeres Society https://xerces.org/sites/default/files/publications/21-038_02_Parks-Guidelines_web-screen.pdf

Creating a Meadow

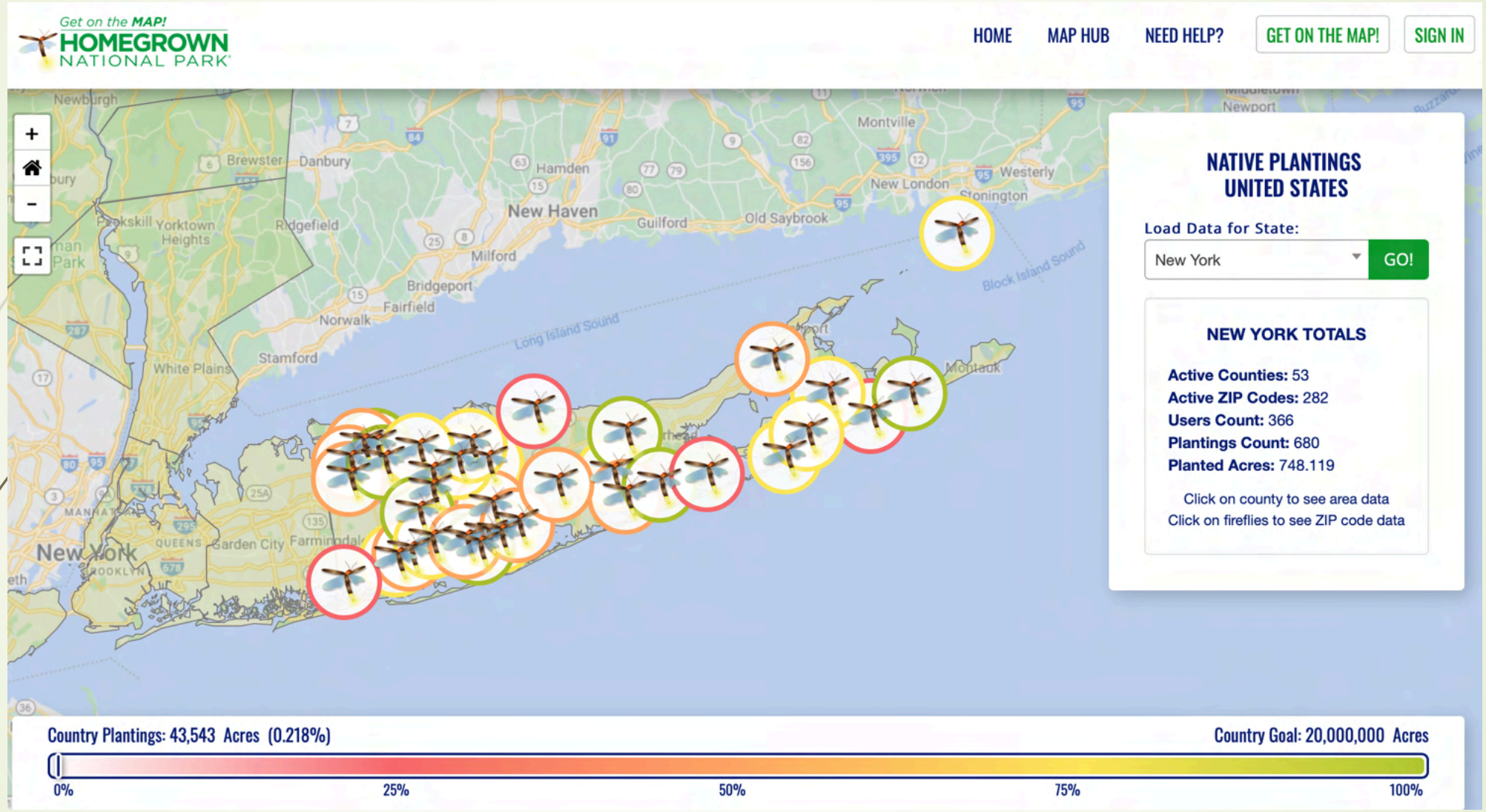
- Site Analysis
  - Light exposure, soil type
  - Grade, topography
- Site Preparation
- Plant Selection
  - Seed mixes / tool kits
  - Up to 1/3 grasses / sedges
- Planting Techniques
  - Fall seeding
- On-Going Management
  - Avoid fertilization
  - Mow every other year

Spread the word

- Talk to Neighbors, Landscapers / Yard maintenance
- Put up a signs
- Host a native Plant Garden Party
- Swap native plants with neighbors
  - Creating Pollinator corridors
- Join / support Pollinator Initiatives
- Encourage village and town boards to adopt ‘native planting’ resolutions
- Participate in Public Events

Bee Recognized

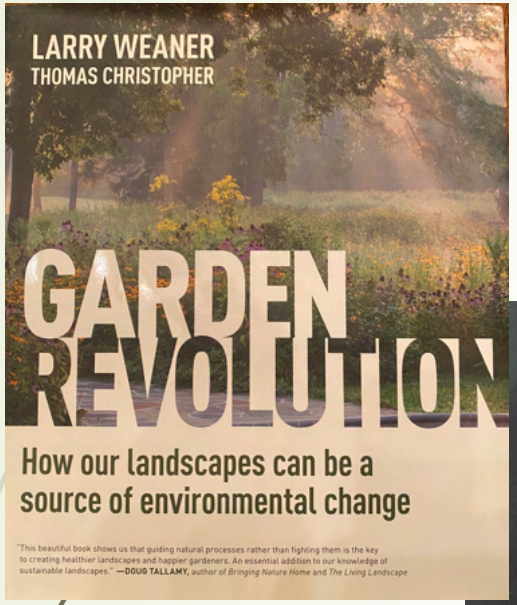
- Certify your Monarch Garden
  - 3 different butterfly nectar plants
  - 3 different caterpillar food plants
  - www.NABA.org
- Commit to 2 out of 3 for the Birds
  - Plant 2 native plants for every 3
  - Remove invasives
  - Use no pesticides
  - www.234birds.org
- Join the Homegrown National Park
  - WWW.homegrownNationalPark.org

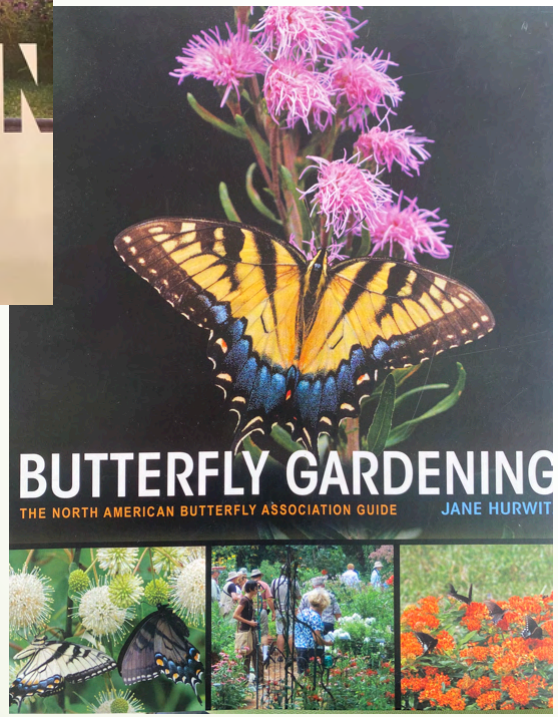

Get on the MAP!
HOMEGROWN NATIONAL PARK
HOME
MAP HUB
NEED HELP?
GET ON THE MAP!
SIGN IN
NATIVE PLANTINGS UNITED STATES
Load Data for State:
New York
GO!
NEW YORK TOTALS
Active Counties: 53
Active ZIP Codes: 282
Users Count: 366
Plantings Count: 680
Planted Acres: 748.119
Click on county to see area data
Click on fireflies to see ZIP code data
Country Plantings: 43,543 Acres (0.218%)
Country Goal: 20,000,000 Acres
0%
25%
50%
75%
100%
New York
Newburgh
Brewster
Danbury
Hamden
New Haven
Guilford
Old Saybrook
Montville
New London
Westerly
Stonington
Milford
Bridgeport
Fairfield
Norwalk
Stamford
White Plains
Ridgefield
Yorktown Heights
Long Island Sound
Block Island Sound
Montauk
Garden City
Farmingdale

My Projects for 2022

- Lawn
  - Raise mower blade to 3”
  - Water and mow less frequently
  - Create space for pollinator lawn
  - Experiment with sod removal
- Install 3 planter boxes
  - Clover / Dandelion
  - Herbs
  - Seed mix / native grasses
- Add plants to pollinator garden area
- Plan for 2023

Resources





- List of nurseries selling native plants
  - Www.QuogueWildlifeRefuge.org
- Native Plant finder by the National Wildlife Federation
  - Www.NWF.org/NativePlantFinder
- Pollinator Action plans
  - www.lincolnconservation.org/pollinators/toolkits
- Long Island Native Plant Initiative
  - www.linpi.org
- Lower Hudson Partnership for Regional Invasive Species Management
  - www.lhprism.org
- North American Butterfly Association
  - www.NABA.org

Credits

- Minnesota Board of Water Supply
- The Lincoln Land Conservation Trust, Lincoln, MA
  - www.lincolnconservation.org
- The Xeres Society
- The NYS Department of Environmental Conservation
- The Long Island Native Plant initiative
- The world wide web . . .
-
- And many more . . .

Thank you . . .