

#### Sue Tarr

Rutgers Master Gardener and Environmental Steward July 17, 2025

## Agenda



The importance of native plants



Transforming your yard

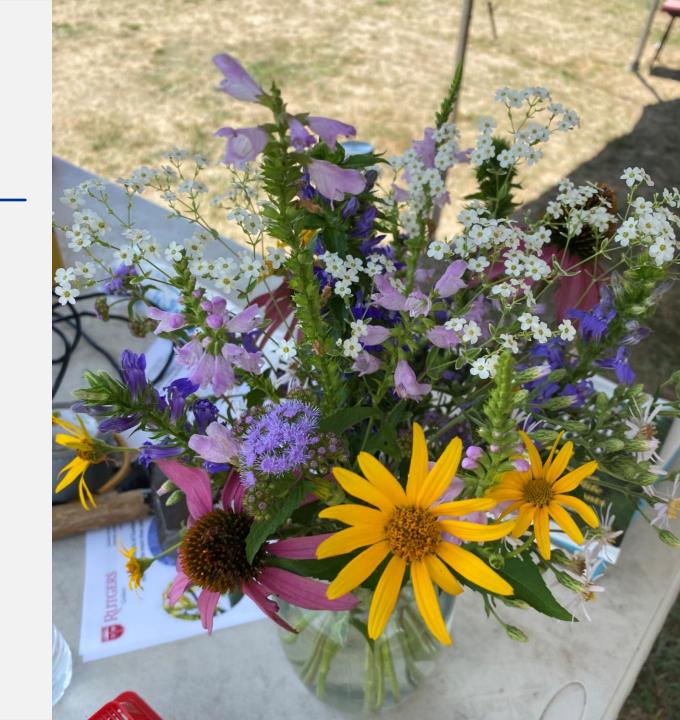


Adding color with native plants

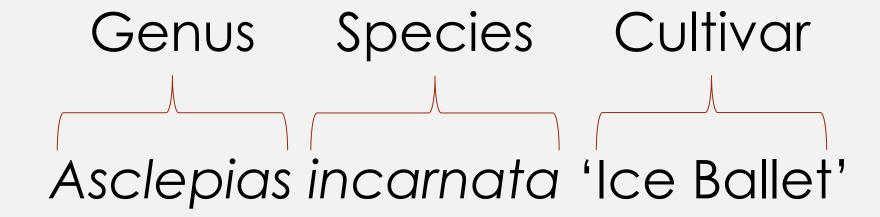


# Native Species USDA

With respect to a particular ecosystem, a species that, other than as a result of an introduction, historically occurred or currently occurs in that ecosystem



## Scientific Nomenclature



# Why Natives?

- Plants are foundation of all terrestrial ecosystems
- Most animals don't eat plants directly, rather indirectly through insects
- → 90% of insect herbivores are specialists
- Slow adaption over millions of years has enabled insect-host plant relationships

Without native plants & insects, entire food web collapses



Monarch caterpillar eating Swamp Milkweed (Asclepias incarnata)

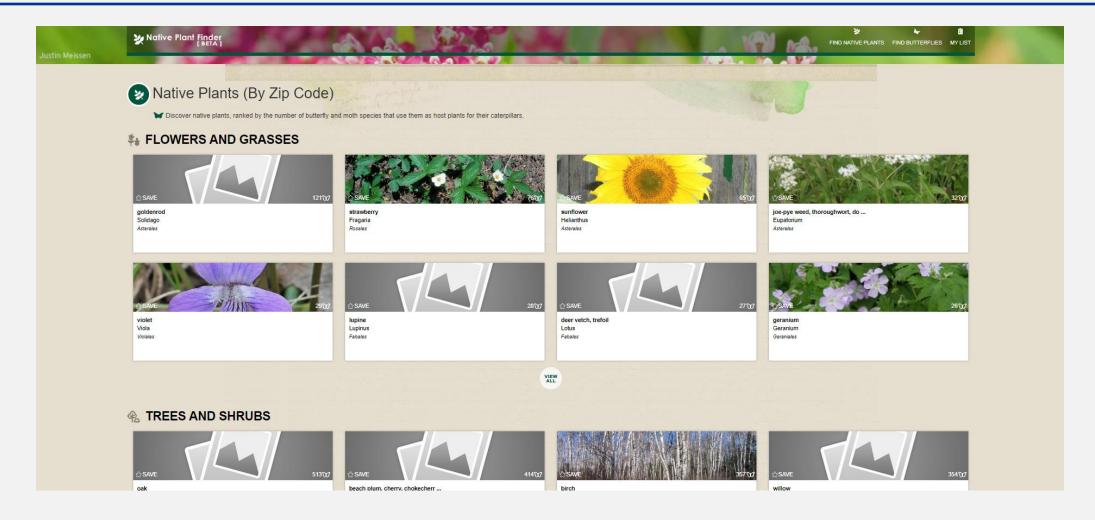
## How Many Natives?

- 96% of birds rear their young on insects, mostly caterpillars
- Carolina chickadees:
   6000 9000 caterpillars until fledging
- Suburban yards need at least 70% native biomass to sustain bird populations

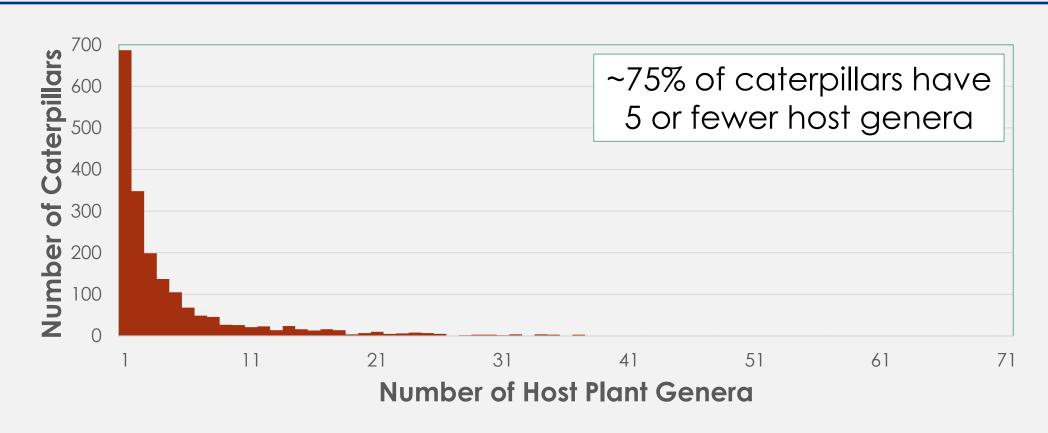


## Which Native Plants?

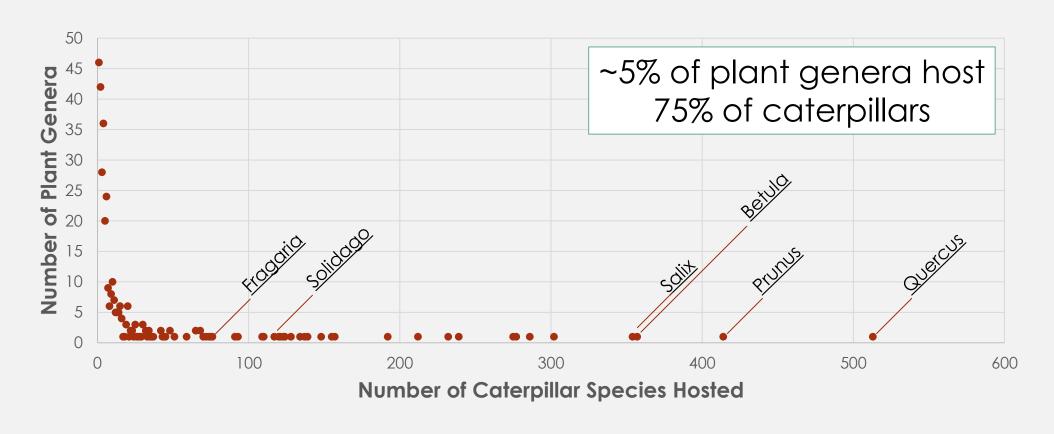
### www.nwf.org/NativePlantFinder



# Caterpillar Specialization Middlesex County



# Best Plants for Caterpillars Keystone Plants



#### Bees

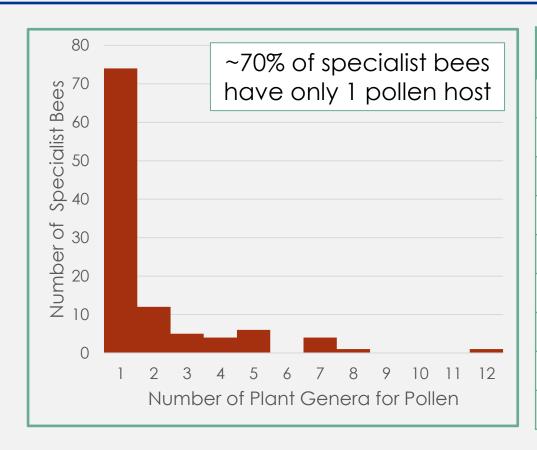
- ~90% of plants pollinated by animals, mostly bees
- 25% of native bees are pollen specialists\*
- ~100 specialist native bees in NJ\*



Colletes species

<sup>\*</sup> Jarrod Fowler, www.jarrodfowler.com

## Specialist NJ Native Bees\*



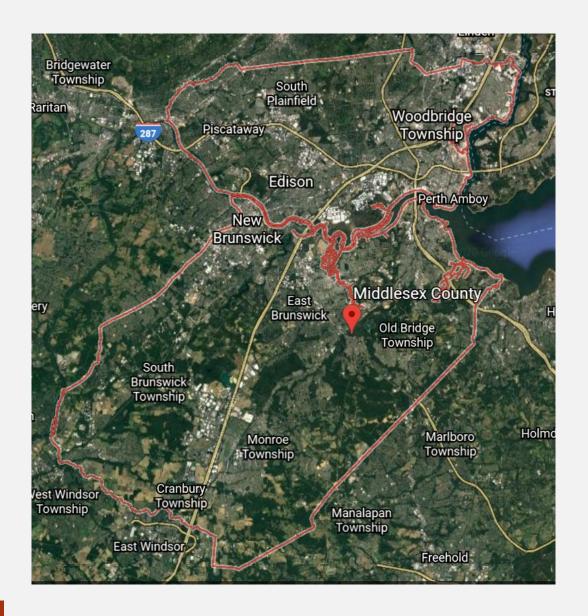
Top Plant Genera	Number of Bees
Solidago	23
Helianthus	16
Rudbeckia	12
Chrysopsis, Grindelia	10
Euthamia, Salix	8
Coreopsis, Symphyotrichum	7
Cirsium	6
Erigeron, Heterotheca, Vaccinium	5
Physalis, Ratibida, Silphium	4

<sup>\*</sup> Jarrod Fowler, www.jarrodfowler.com

## Connectivity Matters

- Native preserves
  - Too small and too separated to sustain biodiversity
- Habitat fragmentation
  - Small populations with natural population fluctuations → extinction
- Biological corridors needed
  - Habitat creation where we live and work

#### Homegrown National Park®



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## Suburban Yards in Transition

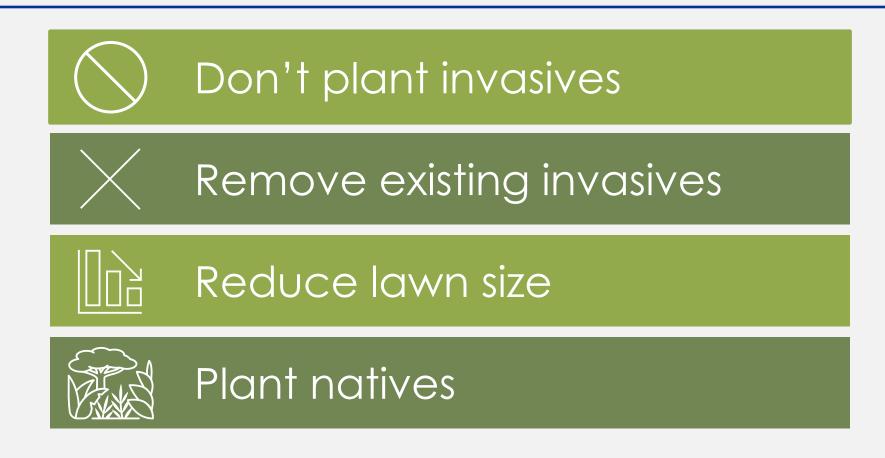
#### Today

- Big lawns
  - High water & fertilizer requirements
- Mostly non-native plants
  - Pest free
- ► Low value to food web

#### **Future**

- Minimal lawn
  - 20% reduction from today
- Mostly native plants
  - No fertilizer or watering needed once established
- Biological corridor to natural areas

### What You Can Do



## Invasive Species

Non-native species whose introduction does or is likely to cause economic or environmental harm or harm to human health



www.njisst.org
Photo: James H. Miller, USDA Forest Service, Bugwood.org



Winged Burning Bush, Euonymus alatus

#### Reduce Lawn

- Make incremental changes
  - Increase size of existing beds
  - Create hedgerows along property lines
  - Create island gardens
- Remove existing grass
  - Cover grass with cardboard & 3"
     mulch layer in spring & plant in fall
  - Dig up with spade (2 3" layer)



Moss Phlox Phlox subulata

Foamflower Tiarella cordifolia

#### Plant Natives

- Good garden design principles
  - Right plant in the right place
  - Select plants to get flowers spring fall
  - Grasses, seeds & bark for winter interest
- Keystone plants
  - Bees like blue, purple, violet, white& yellow
  - Butterflies are attracted to red, yellow, orange, pink & purple
- Green mulch
  - Use plants to do the work of mulch



Moss Phlox Phlox subulata

Foamflower
Tiarella cordifolia

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## **Brilliant Whites**



Penstemon pallidus
Pale Beardtongue



Penstemon digitalis
Foxglove Beardtongue



Prunus maritima
Beach Plum



Symphyotrichum cordifolium Heart-leaved Aster

## Cool Purples and Blues



*Liatris spicata*Dense Blazing Star



Echinacea purpurea Purple Coneflower



Lobelia siphilitica Great Blue Lobelia



Symphyotricum novae-angliae New England Aster

## Evergreens and Green Flowers



# Sunny Yellows and Golds



Packera aurea Golden Ragwort



Zizia aurea Golden Alexander



Coreopsis lanceolata Lanceleaf Tickseed



Coreopsis verticillata
Threadleaf Tickseed

# More Sunny Yellows and Golds



Heliopsis helianthoides
Oxeye Sunflower



Hypericum prolificum Shrubby St. John's Wort



Rudbeckia fulgida
Orange Coneflower



Solidago speciosa Showy Goldenrod

## Fabulous Oranges, Reds and Pinks



Lonicera sempervirens Coral Honeysuckle



Asclepias tuberosa
Butterfly Weed



Lobelia cardinalis
Cardinal Flower



Eutrochium purpureum Sweet Joe Pye Weed

#### Native Plant Sources

- Bowman's Hill Wildflower Preserve, New Hope, PA
- Pinelands Direct, Columbus, NJ, <u>www.pinelandsdirect.com</u>
- Toadshade Wildflower Farm, Frenchtown, NJ, www.toadshade.com
- www.prairienursery.com
- www.prairiemoon.com
- Native Plant Society of New Jersey, <u>www.npsnj.org</u> list of where to buy natives

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#### References

#### Why Natives?

- Tallamy, Douglas W. Bringing Nature Home
- Tallamy, Douglas W. Nature's Best Hope
- Homegrown National Park

#### Getting Started with Natives

Jayne, Sarah W. Nature's Action Guide

#### **Native Plants**

- Leopold, Donald J. Native Plants of the Northeast
- Missouri Botanical Garden Plant Finder
- Lady Bird Johnson Wildflower Center
- Native Plant Society of NJ

#### Photo Credits

#### Lady Bird Johnson Wildflower Center

- Eutrochium purpureum, George H. Bruso
- Liatris spicata, James L. Reveal
- Lobelia cardinalis, Stephanie Brundage
- Lobelia siphilitica, Julie Makin
- Rudbeckia fulgida, Sally & Andy Wasowski

#### Missouri Botanical Garden Plant Finder

- Lindera benzoin
- Heliopsis helianthoides



Viola sororia, Common Blue Violet State Flower of New Jersey