

Natives v. Nativars

Master Gardener Volunteer Training

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Cornell Cooperative Extension
Orange County



Overview

- **Important Terms**
- **More Important Terms**
- **Nativars**
 - **Woody Landscape Plants**
 - **Herbaceous Flowering Plants**



Important Terms

- **Native**
- **Nonnative**
- **Established** – a species having self-sustaining and reproducing populations in a specific geographic area without the need for human intervention.
- **Nuisance** – an individual or group of individuals of a species that causes management issues or property damage, presents a threat to public safety, or is an annoyance.

Important Terms

- **Nonnative**
- **Invasive** – a species that
 - (a) is nonnative to a specified geographic area,
 - (b) was introduced by humans (intentionally or unintentionally), and
 - (c) does or can cause environmental or economic harm or harm to humans

Important Terms

Native	Nonnative
Established	Established
Nuisance	Nuisance
	Invasive

More Important Terms

- **cultivar** – a unique characteristic a species that is cultivated by humans & when reproduced, it retains its unique characteristic(s)
- **variety** – a unique characteristic of a species that is naturally occurring & when reproduced, it retain its unique characteristic(s)

Nativars

- **Native** – a species that occurs naturally in a specific geographic area
- **Cultivar** – a unique characteristic a species that is cultivated by humans & when reproduced, it retains its unique characteristic(s)

NATIVE + CULTIVAR = NATIVAR

Nativars

- **Red Maple** (*Acer rubrum*)



Nativars

- **Red Maple** (*Acer rubrum*)

‘Northwood’

‘Scarlet Sentinel’

‘October Brilliance’

‘Schlesingeri’

‘October Glory’

‘Shade King’

‘Redpointe’

‘Sun Valley’

‘Red Sunset’

‘V.J. Drake’

Nativars

- **Red Maple** (*Acer rubrum* 'Brandywine')



Nativars

- **Purple Coneflower** (*Echinacea purpurea*)



Nativars

- **Purple Coneflower** (*Echinacea purpurea* 'Pink Double Delight')

Double-flowered

Dwarf

Novelty color

Variegated



Nativars

- **Purple Coneflower** (*Echinacea purpurea*)

‘Avalanche’

‘Green Envy’

‘Bright Star’

‘Kim’s Knee High’

‘Cotton Candy’

‘Lilliput’

‘Elton Knight’

‘Little Giant’

‘Fatal Attraction’

‘Milkshake’

Benefits of Natives

- **beauty**
- **provide food and habitat for wildlife**
- **low maintenance**
- **rarely become a nuisance**
- **genetic diversity**

Benefits of Natives

**Do nativars provide the same benefits
as natives?**

Nativars – Woody Landscape Plants

- **Compared native specie's wild types to cultivars**
 - Leaf color
 - Variegation
 - Fall Color
 - Habit
 - Disease Resistance
 - Fruit Size

Nativars – Woody Landscape Plants

- **Compared native specie's wild types to cultivars**
 - Ability to support insect herbivore development
 - Abundance of insects
 - Diversity of insects

Nativars – Woody Landscape Plants

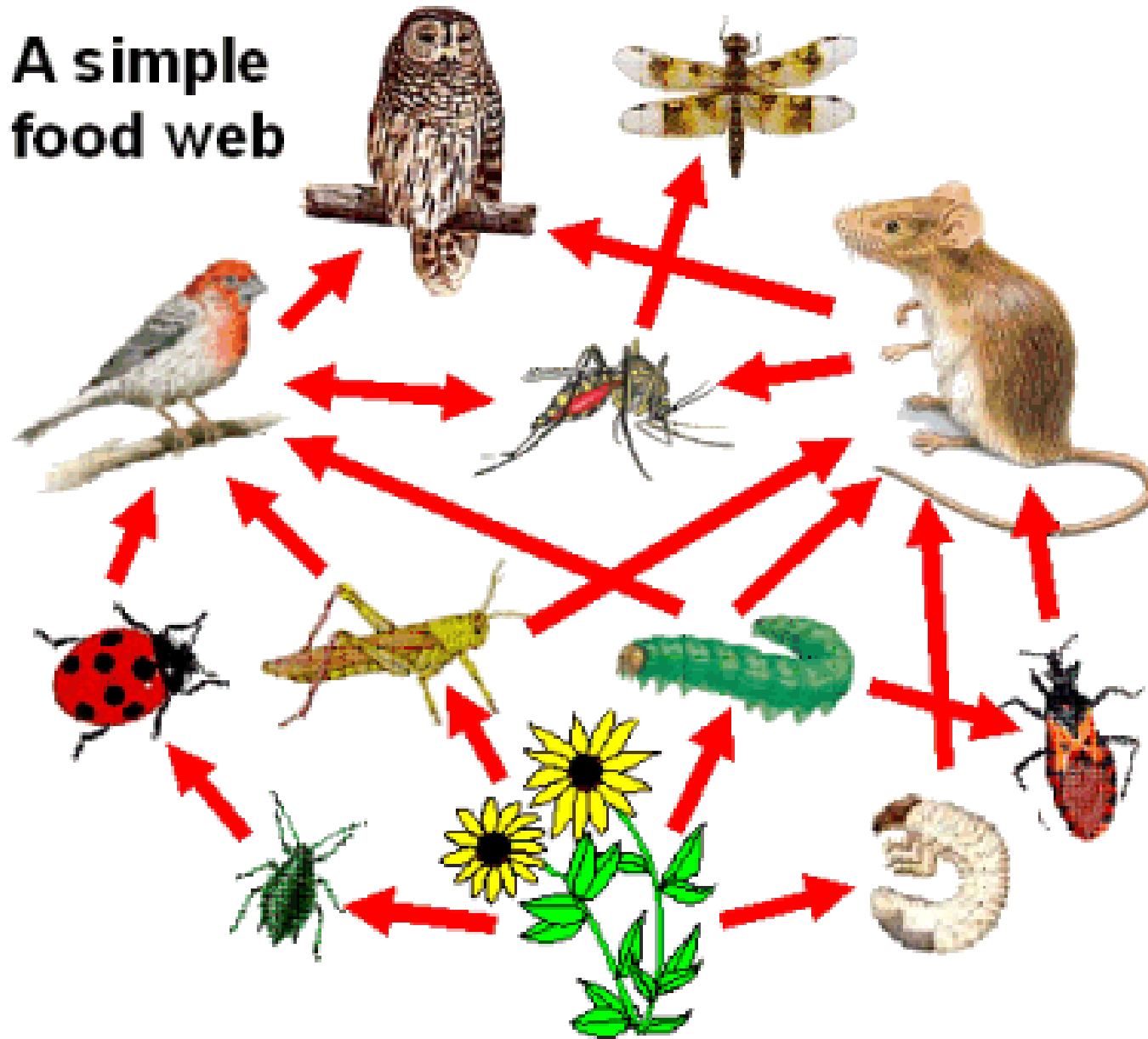
- **Compared native specie's wild types to cultivars**
 - Found leaves altered from green to red, blue, or purple deterred insect feeding

Nativars – Woody Landscape Plants

- **Compared native specie's wild types to cultivars**
 - Insect herbivory is only one measure.

Why Insects??

A simple food web



Nativars – Herbaceous Flowering Plants

- **Compared native species to cultivars**
 - Insect pollination visits

Nativars – Herbaceous Flowering Plants

- Compared native species to cultivars
 - Seven **native species** visited more frequently
 - Four **native species** were visited equally with **cultivar**
 - One **cultivar** was visited more frequently

Nativars – Herbaceous Flowering Plants

- **Compared native species to cultivars**
 - Bees and moths/butterflies showed preference
 - Flies showed no preference

Native Species

Benefits

Adapted to local soils & climate conditions

Preferred host plants for native insects and food source for native birds

Promote biodiversity

Promote conservation and stewardship of our natural heritage

Challenges

Less predictable in the landscape

Less uniform and in size/shape

Aesthetic perception that they are “too wild” and “too weedy”

Difficulty sourcing plant material

Native Cultivars

Benefits

Unique ornamental traits (e.g. new flower or foliage color)

More uniform in size/shape

Some have more flowers and longer bloom times

Easier to propagate

Challenges

Loss of genetic diversity

Less adapted to local soils & climate

May not be open-pollinated and will not self-seed

May be less attractive and provide lower quality resources to pollinators

Figure: A. White

Natives versus Nativars

- **Woody plants** – less insect feeding on leaves altered from green to red, blue, or purple
- **Herbaceous flowering plants** – it depends

Natives versus Nativars

- **Native plants can be hard to find**
- **Native plants have greater genetic diversity!!**
- **Nativars can be bred to be resistant to disease**

Resources

- Baisden, E. et al. 2018. **Do Cultivars of Native Plants Support Insect Herbivores?** HortTechnology 28:5.
<https://doi.org/10.21273/HORTTECH03957-18>
- [**INTERVIEW: Natives and 'Nativars' with Doug Tallamy**](#) -
A Way to Garden
- White. A. 2016. **From Nursery to Nature: Evaluating Native Herbaceous Flowering Plants Versus Native Cultivars for Pollinator Habitat Restoration.** U of Vermont Dissertation.
<https://scholarworks.uvm.edu/graddis/626/>
- [**VIDEO: How Native Plant Cultivars Affect Pollinators by Annie White**](#)
– Grow Native Massachusetts



Questions?