

Citizen Involvement !



V. Roles of Citizens in Stewardship

- A. Work with local HOAs, schools, parks, businesses, etc.
- B. Work with what you already have.
 - 1. Plant to restore open space & save energy
 - 2. Work with School programs.
- C. Be active in the land use decision making processes to promote preservation .
- D. Support local, regional, state & national efforts to preserve land.
- E. Support programs that seek to provide scientific answers and restore healthy natural systems.

A. Work - With What You Already Have

1. Plant your own property to reduce energy consumption and the heat island effect.
2. Create natural habitat in your own yard
(Conservation Landscaping)
3. No parcel is too small to have + effect.

Conservation Landscaping

- Defined – Landscaping for the purpose of reducing the need for water, fertilizer and general maintenance while enhancing and restoring natural local habitats.

Can an introduced plant “become” native?

Plant	Homeland herbivores	Novel herbivores	Years since introduction
<i>Phragmites australis</i>	170 species	5 species	300+
<i>Eucalyptus stellata</i>	48 species	1 species	100
<i>Opuntia ficus-indica</i>	16 species	0 species	250
<i>Clematis vitalba</i>	40 species	1 species	100
<i>Metaleuca quinquenervia</i>	409 species	8 species	120

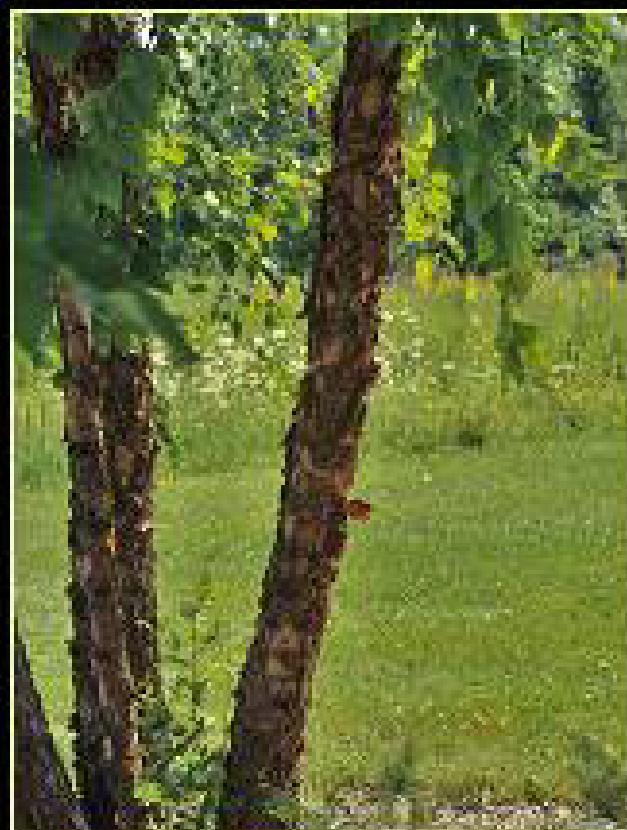


Common reed *Phragmites australis*

Slide courtesy Dr. Douglas
Tallamy, Univ. of Delaware

Ten most valuable woody plant genera for supporting Lepidoptera

- *Quercus* (oaks) 534 spp
- *Prunus* (cherries) 457 spp
- *Salix* (willows) 456 spp
- *Betula* (birches) 413 spp
- *Populus* (poplars) 368 spp
- *Malus* (crabapples) 311 spp
- *Vaccinium* (blueberries) 288 spp
- *Acer* (maples) 285 spp
- *Ulmus* (elms) 213 spp
- *Pinus* (pines) 203 spp



River Birch
Betula nigra

Ten most valuable ornamental perennial genera for supporting Lepidoptera

- *Solidago* (goldenrod) 115 spp
- *Aster* (asters) 112 spp
- *Helianthus* (sunflower) 73 spp
- *Eupatorium* (Joe Pye, boneset) 42 spp
- *Ipomoea* (morning glory) 39 spp
- *Carex* (sedges) 36 spp
- *Lonicera* (honeysuckle) 36 spp
- *Lupinus* (lupines) 33 spp
- *Viola* (violets) 29 spp
- *Geranium* (geraniums) 23 spp
- *Rudbeckia* (black-eyed Susans) 17 spp



Wrinkle-leaf Goldenrod
Solidago rugosa

Conservation Landscaping Cont.



- Basic Requirements to Create Habitat
 - Space
 - Cover (Shelter)
 - Food
 - Water

Conservation Landscaping Cont.

1. Select a Goal for Your Garden

Examples:

- Reduce Water Consumption
 - Hummingbird Habitat
 - Butterfly Habitat
 - Amphibian Habitat, etc.
-
- Study to see what a desired species needs as food, shelter, water, etc.



Conservation Landscaping, Cont.

2. Analyze Physical Characteristics

- Consider Existing Forest Types & Habitat
 - Vegetative Layers
- Macroclimate – Don't Fight Nature
- Microclimate:
 - Soils – test and amend wisely
 - Levels & Direction of Sunlight
 - Water Regimes – Slope, Soil type, Gutter Downspouts, Drainage Patterns.

Conservation Landscaping, Cont.

3. Factor in the human element:

- Where will you view the garden
- What will your neighbors appreciate/not appreciate.
- What problems might you encounter with neighborhood animals (cats, dogs, etc.)
- What existing features can you not change? (drainage pipes, patios, easements, etc.)

Conservation Landscaping, Cont.

4. Determine what Plants, Water Features, Shelter, Feeders, Etc. are needed/desired.
 - Elaborate designs are not necessary.
 - Allow for Things to be Eaten.
 - Resources



Conservation Landscaping, Cont.

5. Draw Up Your Plan

6. Consider Planting in Stages

Install the Big Pieces First.

7. Be Flexible

a) Learn as you go.

b) Adjust as you learn.

Riparian Restoration: Example #1 - Cloverdale Park



**Cloverdale Park
April 2001. Sloughing bank area.**



Volunteers install stream protection and tree seedlings.
April 2001.



Planting Day



Note Holes dug through Coconut mats



Cloverdale
Park Before
Planting Aug
2000



View of
same area
2003.

Stream Bank
@ Bridge
Planting Day,
2001



June 2003

Cloverdale Park Edge

May 2001



June 2003



**Cloverdale Park
April 21, 2001. Planting Completed.**

July 2001.
Middle of first Growing season. Mulch has been laid.



**Sept. 2002.
End Second Growing Season**



June 2003.
Middle of third growing season.



June 2004
Fourth growing season.



Cloverdale Park
Before Restoration
March 2001.



February 2006.
Winter of 5th Year
After Restoration.



**Cloverdale Park,
February 2006.**

**Winter of 5th
Year After
Restoration.**

**Winterberry
(*Ilex verticillata*)**





Example #2 -
Veterans Park

Veteran's Park - March 2000



View from Opposite Side



March 2000

Sloughing Banks: March 2000





Interpretive signs – help educate and protect your hard work.

**Excellent
Growth 3
months
after
planting**





Summer 2000 – Year of Planting



October 2008 – 8 Years After Planting

May
2000



October
2008

April 2000



October 2008





Red Chokeberry
(*Aronia arbutifolia*)

Arrowwood
(*Viburnum dentatum*)



Mile-a-minute Oct. 2008



 PLEASE 
STAY ON PATHS
RIPARIAN RESTORATION
IN PROGRESS

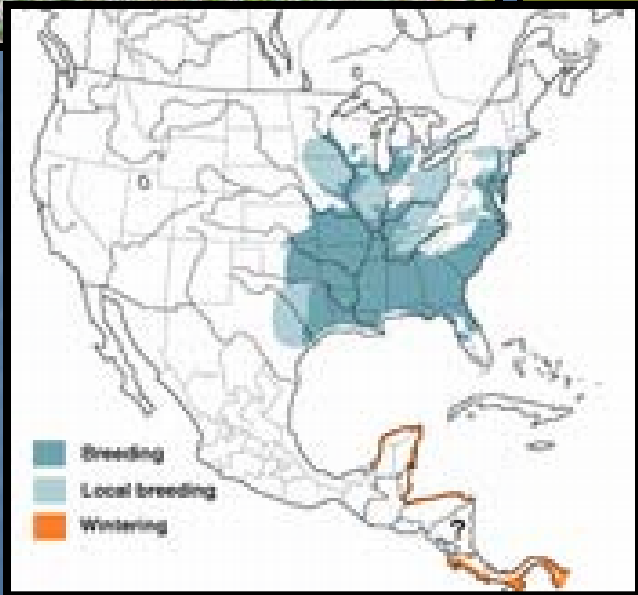
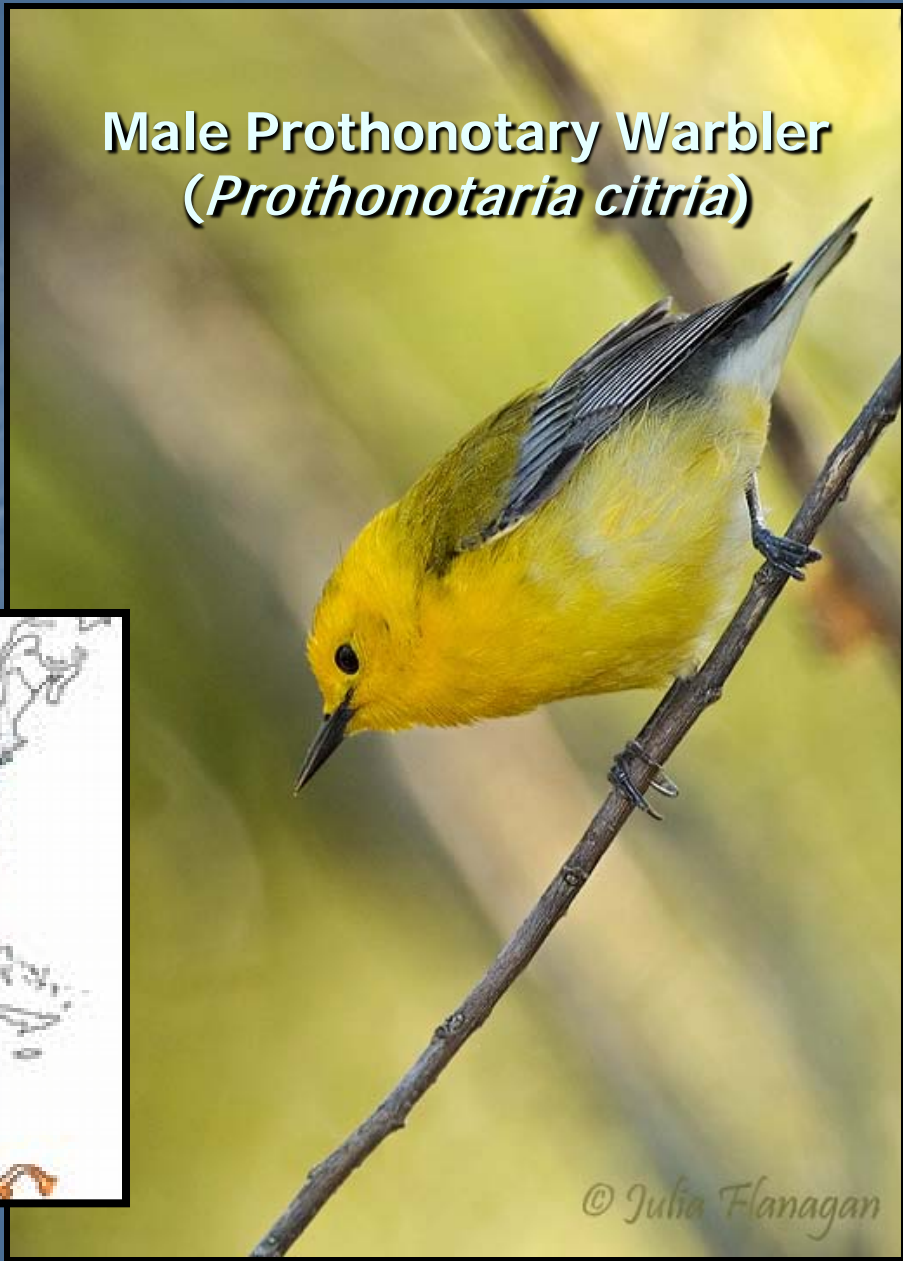


Newly Discovered Invasive Non-native (Alien)





Male Prothonotary Warbler (*Prothonotaria citria*)



Distribution of
the Prothonotary Warbler

© Julia Flanagan

Aerial Image of the restoration site showing a transition from lawn to a forest system connecting to neighboring riparian forest



2008



2000

Veterans Park

The End - Questions?

