

Birdscaping your Lakeshore Property



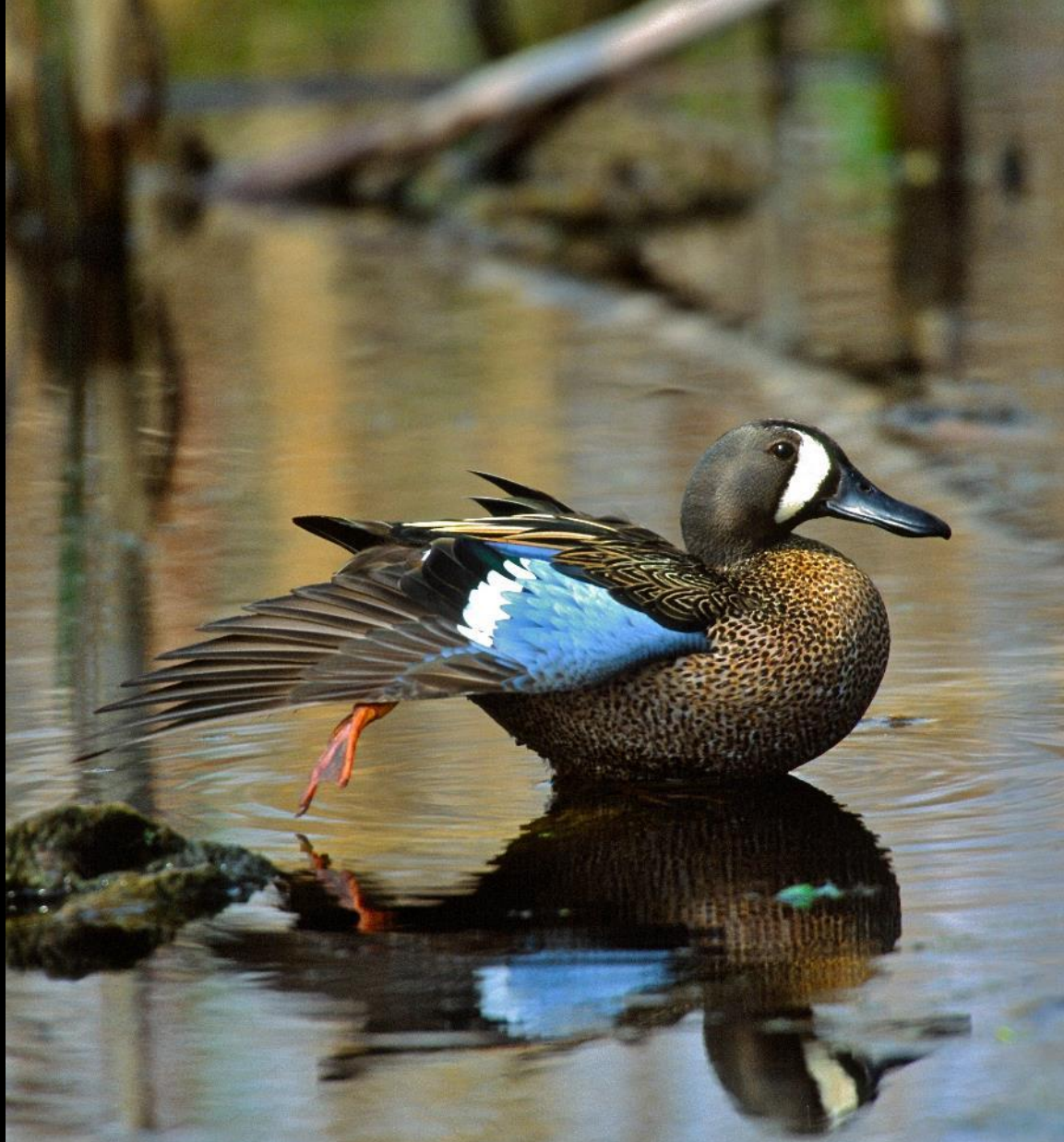


Yellow Warbler

Tree Swallows



J. Barthomai



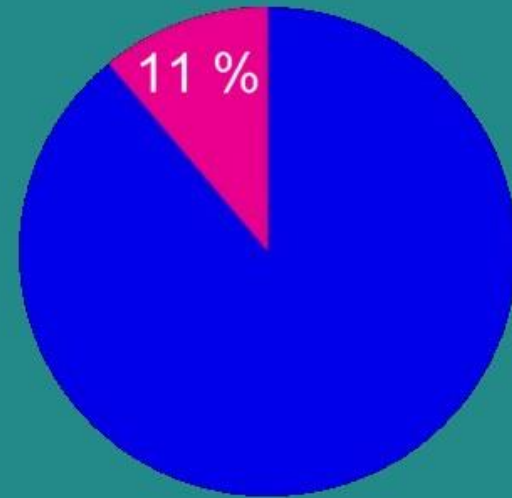
Blue-winged Teal

J. Barthomai

Percentages of bird species which come to feeders

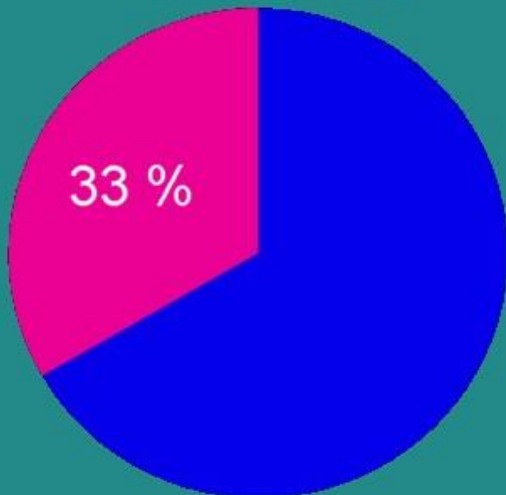
- Birds at feeders 
- Birds not at feeders 

North American Species

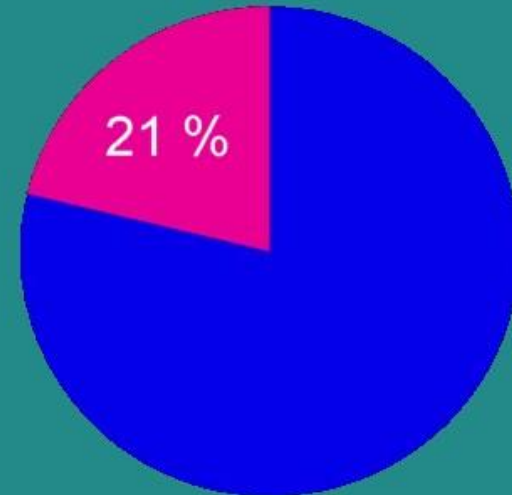


Yards with native landscaping

Nowak's



Tuft's





T. Stegemann



M Kelly

Lakes Like Less Lawn



Problems with Lawns

No food or habitat for birds or other wildlife

Except for 25 geese grazing on your grass!

Shoreline erosion/lake sedimentation

Algal blooms

Excessive aquatic plant growth



Solution: A Shoreline Birdscape

Best for birds

Protects from erosion

Extensive root systems

Less mowing and money

Keeps lake clean

Deters geese



T. Stegemann



**Less time mowing
Less pollution**

**More time fishing
& birdwatching!**

Planning Your Shoreline Birdscape

Get needed permits for work below high water mark - DNR & county

Remove invasives

Remove unwanted vegetation (lawn, etc)

Plant native vegetation



T. Stegemann

Purple Loosestrife



Glossy Buckthorn





Geneva Lake Shoreline
Buckthorn replaced with native shrubs and trees.

F. Amerson

A close-up photograph of a brown tabby cat sitting in a field of tall, green grass. The cat's head is turned slightly to the right, and its eyes are partially visible through the blades of grass. The lighting is bright, creating a dappled effect on the cat's fur and the surrounding vegetation.

**Also
Invasive**

How Many Animals Do Cats Kill?

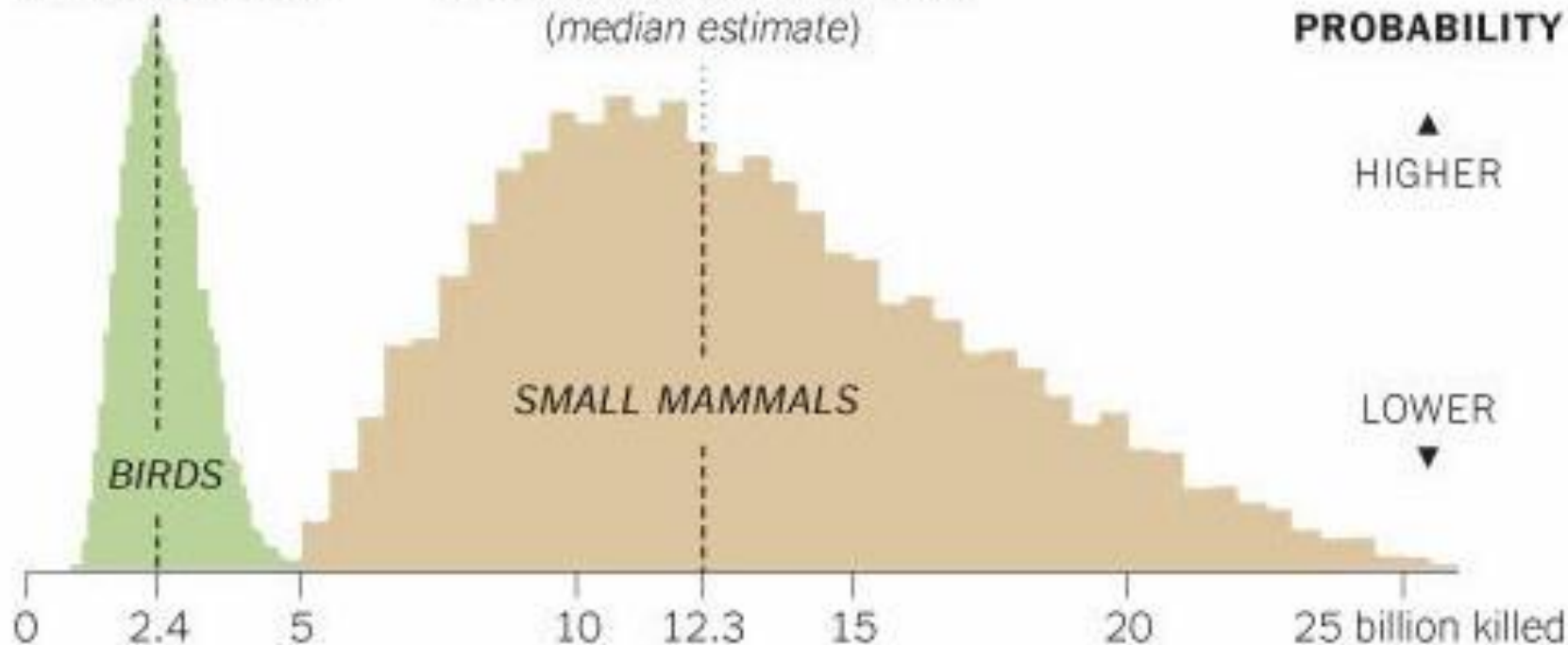
Feral, stray and pet cats kill billions of birds and small mammals every year in the United States. Researchers used data from 21 studies to estimate the number of animals killed, which is higher than previous estimates.

2.4 billion birds

killed each year
(median estimate)

12.3 billion mammals

killed, including mice, rats,
voles, squirrels and rabbits
(median estimate)



Source: Nature Communications

THE NEW YORK TIMES



.Barthomai

**Up to One Billion Birds Killed
Annually in Building Collisions**

Landscaping for Birds with Native Plants

Provides food for birds



**Purple Martin
with Dragonfly**

Diet = insects

Eastern Phoebe's diet = mainly insects
Winter = berries, seeds



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Blue-winged Teal

Diet = mainly seeds



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Egrets' diet = mostly fish



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Osprey 's diet = Fish



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Landscaping for Birds with Native Plants

Provides cover & nesting sites



Green Heron Nest

A close-up photograph of a Tree Swallow perched on the bark of a tree. The bird is facing right, with its head slightly turned towards the camera. It has iridescent blue-green feathers on its back and wings, and a white throat and breast. A dark, irregular hole in the bark, which serves as a nest cavity, is located directly behind the bird's head. The tree bark is rough and textured, with some yellowish lichen or moss visible. The background is a soft, out-of-focus green.

**Tree Swallow
at
Nest Cavity**

J. Barthomai



Tree Swallow Nest

J. Barthomai



What's a Native Plant?

“More Than Just a Pretty Face”

A native plant species is one that has evolved in a given place and has developed essential relationships with other organisms in a given ecological community.

Why Native Plants are Best For Birds

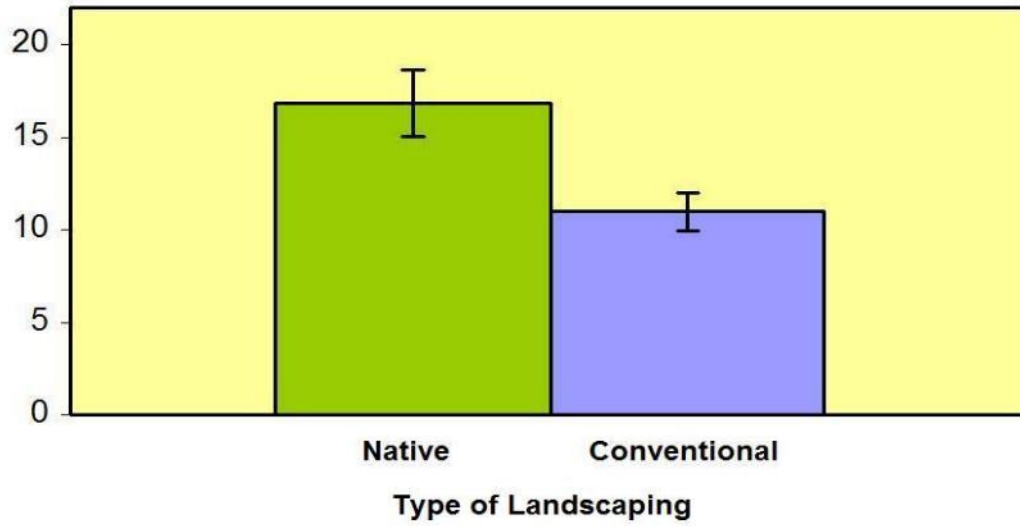
Provide best food at the best time for birds

More birds in areas with native plants

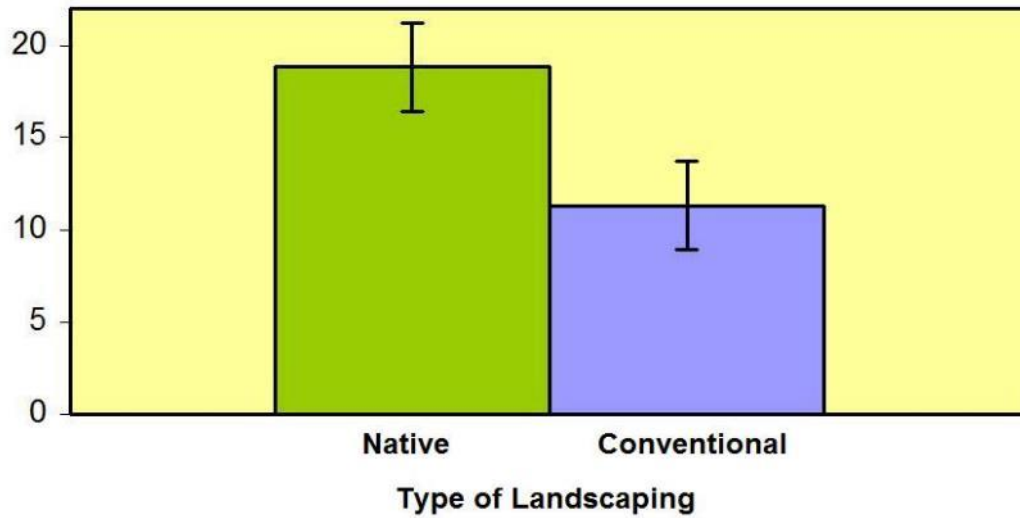
Nests in natives are less preyed upon

Natives are easier to grow, better adapted

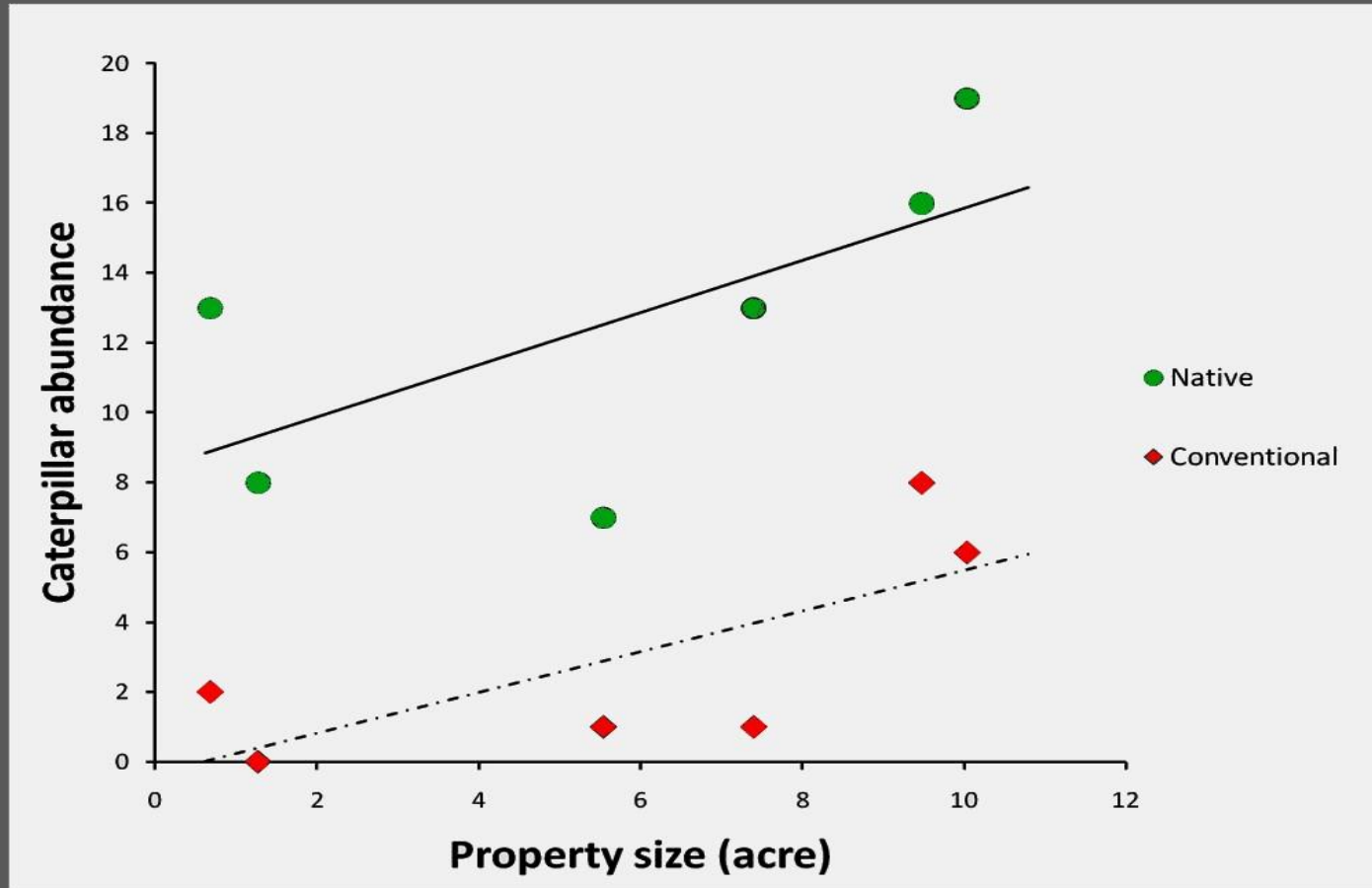
Bird Abundance



Bird Species Richness



Caterpillar abundance on similar-sized properties, native vs conventional

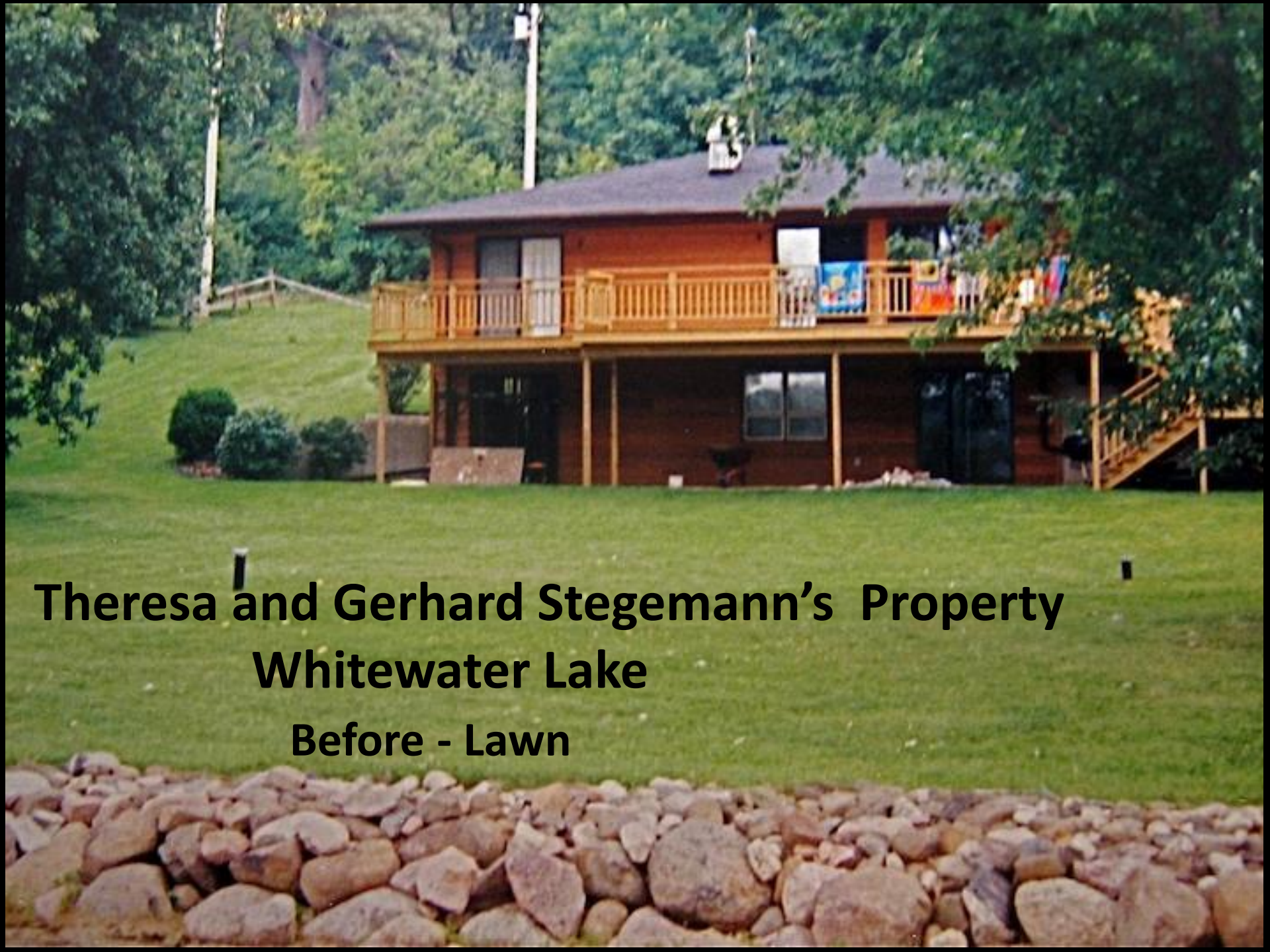


Wider is Better

The linear width from the shoreline edge should be as wide as possible.

*“Large patches typically conserve a greater variety and quality of habitats, resulting in **higher species diversity and abundance.**”*

*Bentrup, G. 2008. Conservation buffers
In Managing the Water's Edge SEWRPC 2010*



**Theresa and Gerhard Stegemann's Property
Whitewater Lake
Before - Lawn**

Stegemann's Established Native Landscaping



Stegemann's Native Garden Attracts Many Birds



Bluebird with caterpillar



Eagles, but no geese

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Tom Gamfield's Property Whitewater Lake



Lawn Before
Landscaping

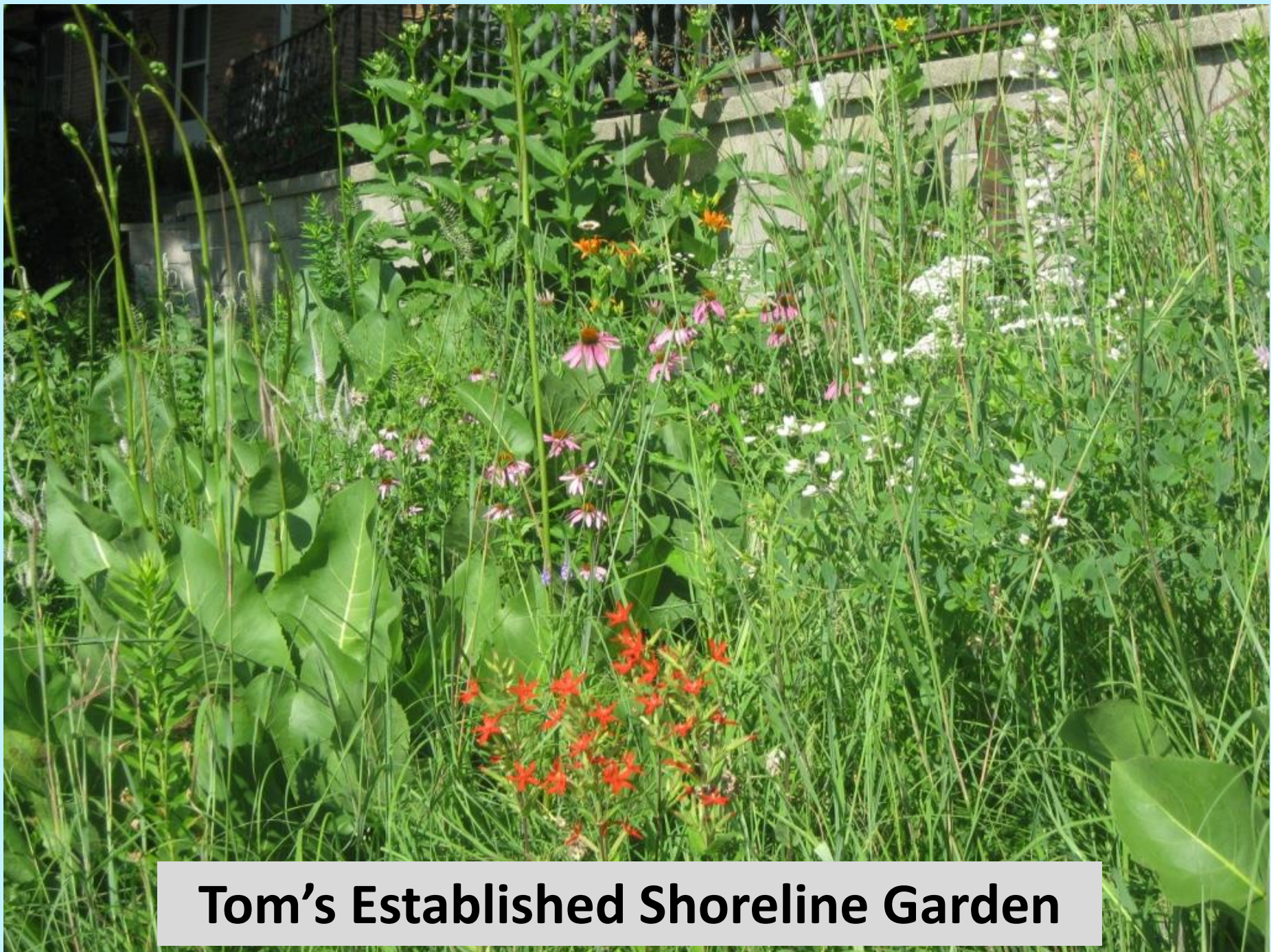


Beginning Landscaping
– erosion barriers

Tom Gamfield's Property Whitewater Lake



Early Garden, Year 2



Tom's Established Shoreline Garden

Hummingbirds nectared on Tom's flowers



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Hummingbirds also nested on Tom's property.

Middle Lake Lauderdale Lakes Walworth County



Early Plantings
Erosion Barrier in Place



Middle Lake, Established Shoreline Landscaping

F. Amerson

Markos Property, Geneva Lake

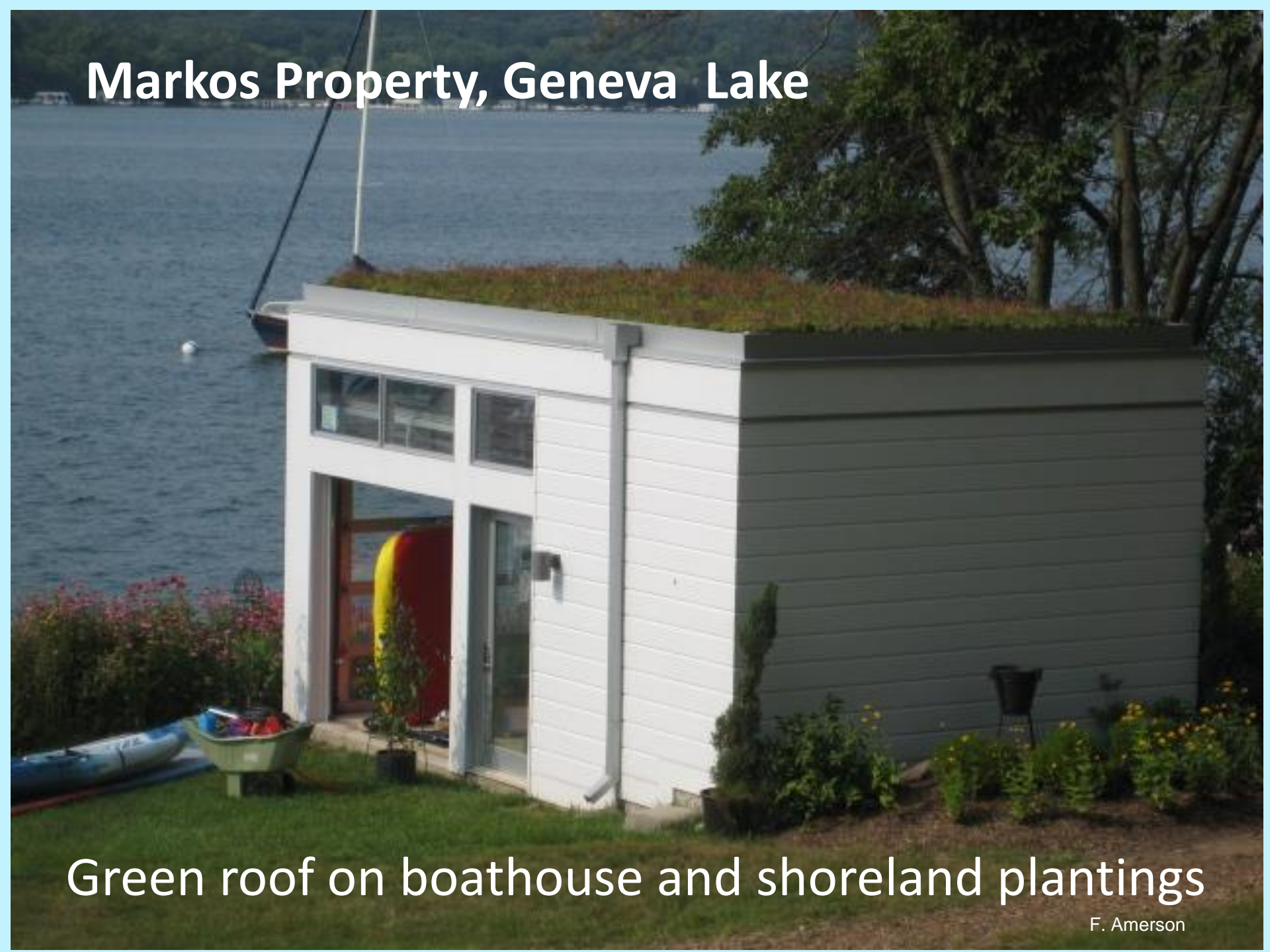
Permeable Pavers

Shoreline Garden

Rain Garden

Markos Property, Geneva Lake

Green roof on boathouse and shoreland plantings



Markos Property, Geneva Lake



Native plantings around on-shore pier storage

Shoreline Landscaping on Slopes



Erosion Control Blanket



Retaining Walls

Shoreline Landscaping with Path



F. Amerson

Shady Shoreline Garden



F. Amerson

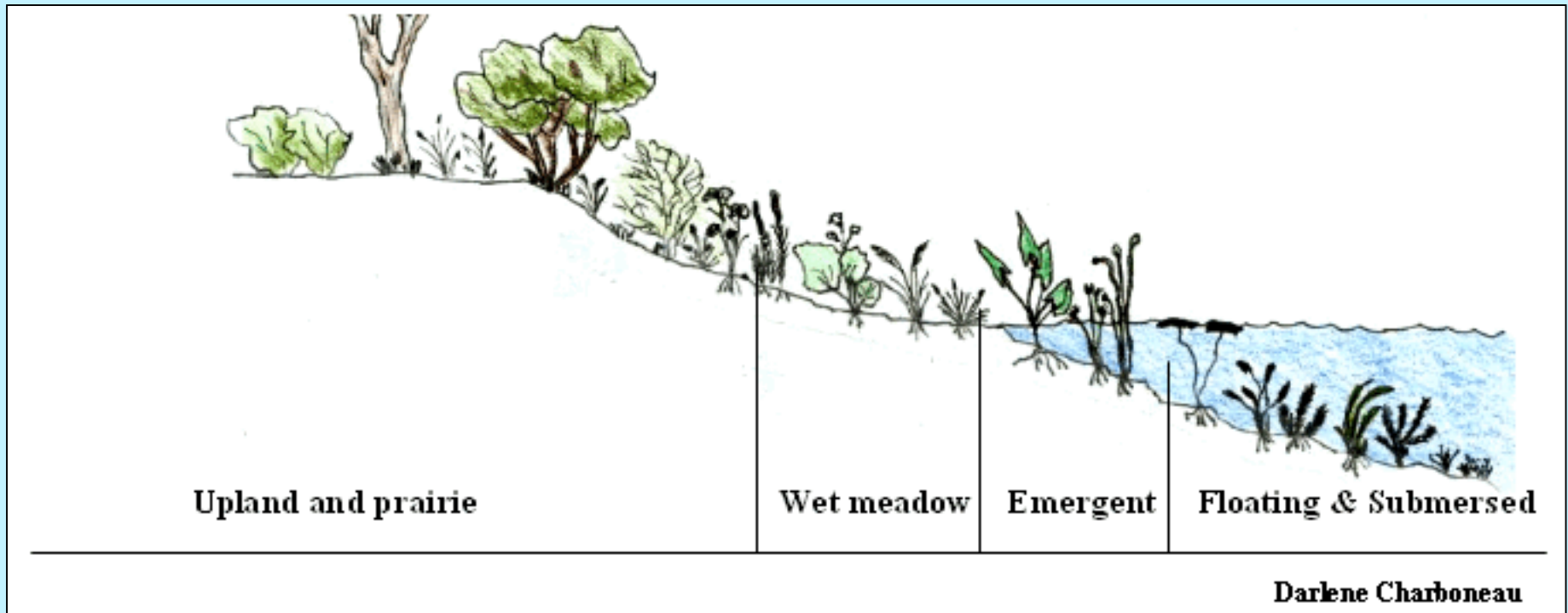
Lakeshore State Park, Milwaukee



A. Vickio

What to Plant

4 Shoreland Zones = 4 Bird Habitats



Floating & Submersed Plants



Christian Fischer wikipedia commons



Importance of Floating and Submerged Plants

- 1. Produce food and cover for wildlife.**
- 2. Produce oxygen in water through photosynthesis.**
- 3. Emergent plants break wave energy, preventing erosion.**
- 4. Plants stabilize bottom sediments reducing turbidity in water.**

Birds That Find Food and Habitat in Floating & Submersed Plants



Wood Duck

Diet

Mostly seeds of
aquatic plants
and fallen
seeds of trees
and shrubs

Blue – Winged Teal

Diet

Mostly seeds
of
sedges
smartweeds
pondweeds



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Trumpeter Swans

Feed mainly on stems, leaves, roots of aquatic plants

First 2 weeks, young feed on small invertebrates



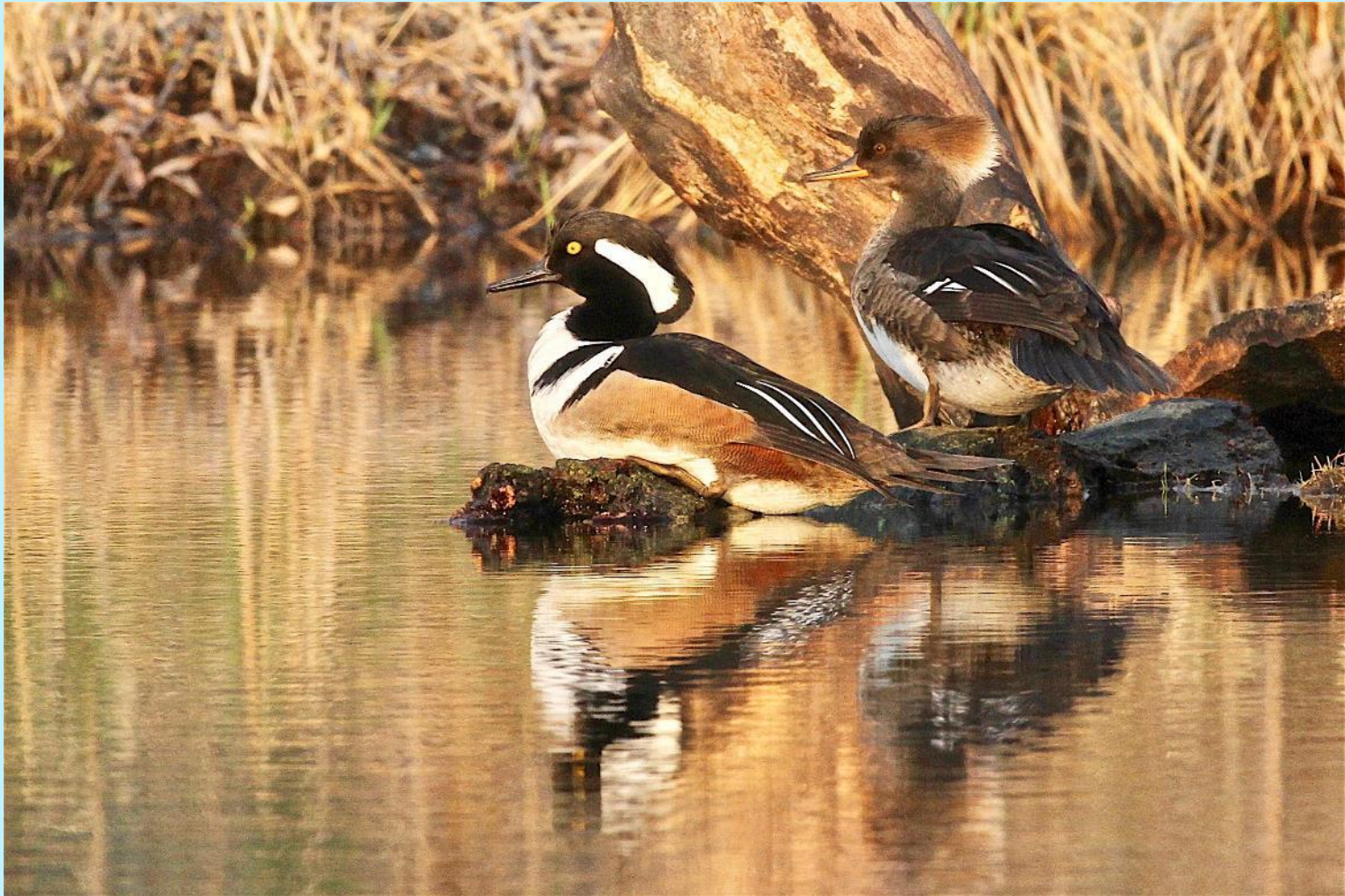
Water Birds

Aquatic plants improve water quality which insures quality food



**Common Goldeneyes forage underwater
for crustaceans, small fish and insects.**

Hooded Mergansers eat small fish and aquatic life.



Hooded Mergansers



**Emergent
vegetation offers
brood habitat.**



Hooded Mergansers



**Nest in
Tree Cavities
or Nest Boxes**



Green Heron

Stalks small fish and aquatic creatures near shore.



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Pied-billed Grebe

Feeds on insects, fish and other aquatic life
Nests in shallow water in emergent vegetation



Common Loon

Feeds on small fish

Nests in vegetation on islands or shores



D. Nowak

Spotted Sandpiper

Forages for invertebrates on water, land or in air.



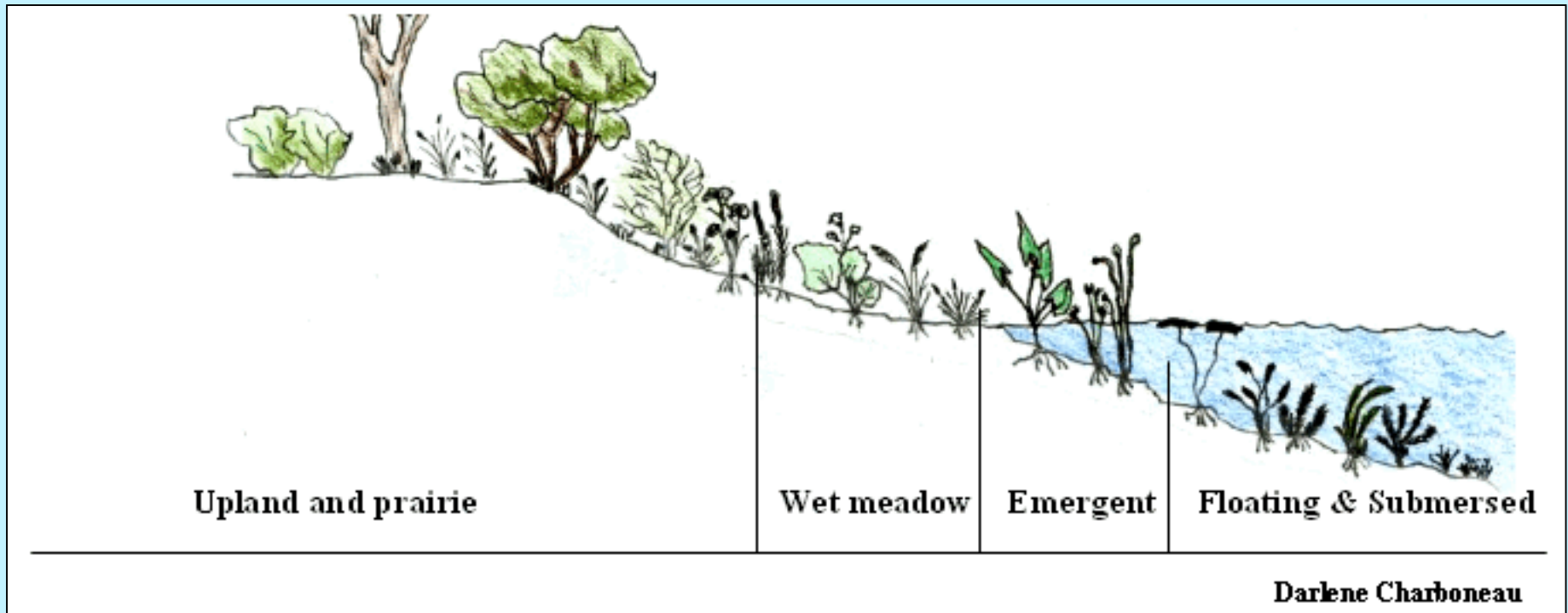
Spotted Sandpiper young leave nest after hatching.



J. Barthomai

What to Plant

4 Shoreland Zones = 4 Bird Habitats



Importance of Wet Meadow and Upland Plants

- 1. Provide food and cover for birds and other wildlife**
- 2. Extensive root systems stabilize lake banks from pounding waves.**
- 3. Plants on slopes hold soil in place during rains, helping to keep lake clean.**
- 4. Upland plants absorb phosphorus and nitrogen from fertilizers and animal waste, reducing lake pollutants.**

Healthy Lakes Grant

Grants from Wisconsin Department of Natural Resources

Cost sharing: 75% DNR, 25% individual

Need sponsor such as lake district, environmental group or government agency.

Choose from 5 lakeshore best practices

350 square foot Native Planting

Rain Garden

Also Diversion, Rock Infiltration and Fish Sticks

Wet Meadow Plants for Lakeshore Edge

Recommended Species, Healthy Lakes Grants



Calico Aster



Marsh Milkweed



**Grass-leaved
Goldenrod**

More Wet Meadow Plants



**Dark Green
Bulrush**



Speckled Alder



Switchgrass



Common Yellowthroat

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Sandhill Crane



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Upland & Prairie Plants for Dry-Medium Soils

Recommended Species, Healthy Lakes Grants



**New England
Aster**



Butterfly Milkweed



**Rough Blazing
Star**

More Plants for Uplands, Medium-Dry Soils



Indian Grass



Serviceberry

Cedar Waxwing



Goldfinches



Indigo Bunting



Oaks also
recommended

A photograph of a Chickadee perched on a branch of an oak tree. The bird is facing right, showing its characteristic black cap and white breast. The background is a soft, out-of-focus green. The text "Oaks also recommended" is in the top left, and "Chickadees Thrive with Native Plants" is at the bottom.

Chickadees Thrive with Native Plants

Tips for Planting

Seeds

Not recommended within 15 feet of shoreline due to erosion on bare soil

Plant Plugs

Higher costs, but earlier results

Vegetation Mats

Expensive, but very easy, especially on slopes

Vegetated Mats Geneva Lake Shores



**Native grasses &
wildflowers seeded into
engineered soil with a
lightweight core.**



Native Landscaping on Geneva Lake Shoreline Established with Vegetated Mats



Where Can You Get Native Wildflowers?

Native plant nurseries

See dnr.wi.gov

**Ask local Wild Ones Chapter for local
nurseries**

**Native plant sales at nature centers &
Wild Ones chapter events**

What About Cultivars of Native Plants?

- **Cultivated varieties of a native plants**
- **Selected by plant breeders for special traits**
- **Maintained through propagation**
- **Often very profitable**



Native Bloodroot

Pollen, nectar & seeds for wildlife



“Multiplex” Bloodroot

No pollen, nectar, seeds for wildlife!

Don't Use Cultivars of Native Plants

Purple Coneflower

Insects preferred

Seeds for birds



Purple Coneflower 'White Swan'

Significantly less preferred

Many nativars – no seed



University of Vermont Research

Pollinator Preferences

Native Plants vs Cultivars of Native Plants

**Significantly more pollinators on straight
natives in 10 of 12 species**

**“The more manipulated the cultivar, the less
attractive to pollinators.”**

Cultivars of Native Trees

All-Male Seedless Trees

Trees

SEEDLESS: Some trees are male or female. Seed is sometimes a nuisance. In these Sylvan sells Selections that are male, 'seedless'.

PATMORE ASH is a selection of Green Ash. It is probably the best shade tree for this area. Medium growth rate. Dense shade. Seedless. Very few problems.

HONEYLOCUST: Skyline, Imperial, Shademaster are several selections. They differ in shape and size. All are seedless. Honeylocust leaves are small, so it gives light filtered shade. It works well even in small front yards. Medium growth rate.

SILVER MAPLE is not recommended by Sylvan. They tend to be chlorotic and have surface roots in the lawn. However, Sylvan does sell a 'seedless' variety called 'Silver Queen'.

COTTONWOOD also known as Poplar are the fastest growing shade trees. Only seedless selections should be planted, since the cotton plugs air conditioners, screens.

Maple - McKay Seedless

Product Description:

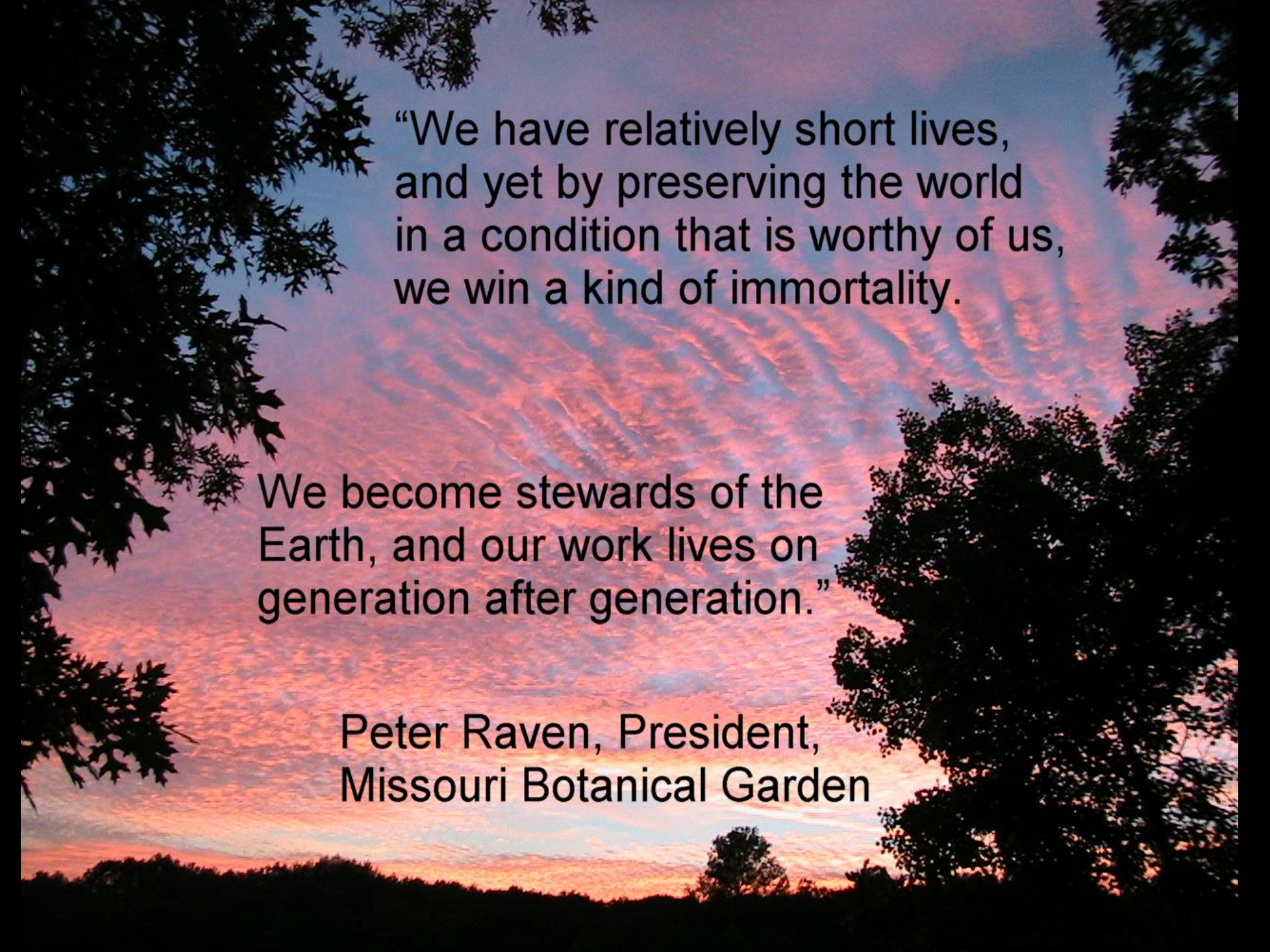
The McKay Seedless Maple, *Acer saccharinum*, has an upright, oval form and is a very vigorous, seedless form of the common Soft Maple. This stately tree is a rapid grower, easy to transplant and a seedless Silver Maple variety.



Beautiful Birds, Views and Flora







“We have relatively short lives,
and yet by preserving the world
in a condition that is worthy of us,
we win a kind of immortality.

We become stewards of the
Earth, and our work lives on
generation after generation.”

Peter Raven, President,
Missouri Botanical Garden

Photographers

Fay Amerson

Jack Bartholmai

Christian Fischer, Wikipedia Commons

Robert W. Freckman, UW Herbarium

Tom Ganfield

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Monica Kelly

David and Mariette Nowak

Theresa Stegemann

Douglas Tallamy

Angela Vickio

Judy Wildermuth