

Native Seedhead Gardens

For Native Birds

Presented by Lauria McShane
Wildlife Habitat Outreach Specialist



Meet the Team



Smithsonian
*National Zoological Park
Conservation Biology Institute*



**QUAIL
FOREVER**



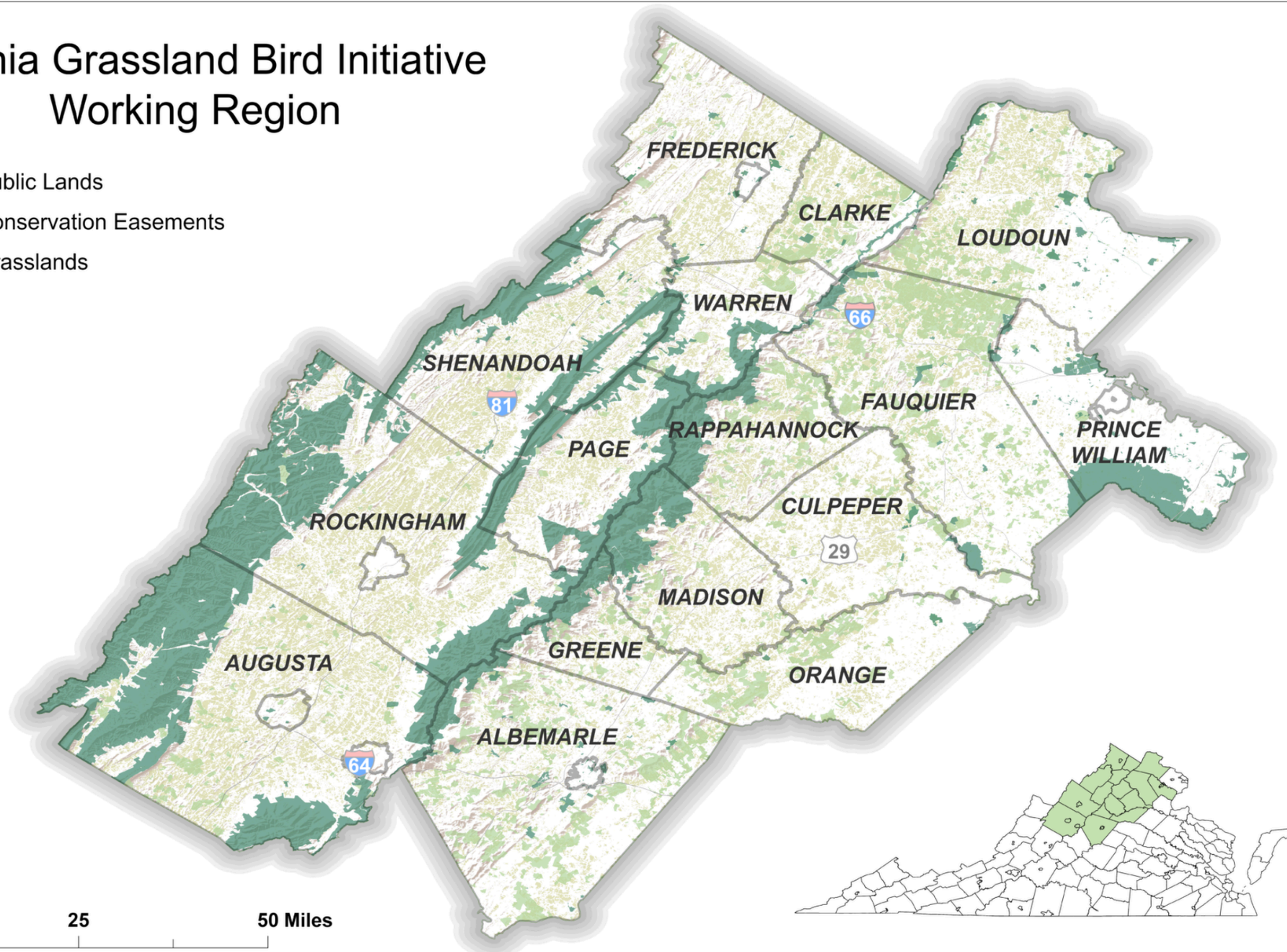
American Farmland Trust
SAVING THE LAND THAT SUSTAINS US



SHENANDOAH VALLEY
CONSERVANCY

Virginia Grassland Bird Initiative Working Region

- Public Lands
- Conservation Easements
- Grasslands



Meet Virginia's Grassland Birds

Obligate grassland-nesting species

"Only nest in grasslands, including livestock pastures, hayfields, & fallow fields"

Horned Lark



Eastern Meadowlark



Grasshopper Sparrow



Bobolink



Savannah Sparrow



Meet Virginia's Grassland Birds

Facultative grassland-nesting species

"Occasionally nest in grasslands depending on local circumstances"

More than 60 species of birds rely on grasslands.



Meet Virginia's Grassland Birds

Grassland Foragers

"Nest in other habitats—including cavities in dead snags, shrubs, wetlands, and forests—but commonly forage in and over grasslands."



Bobolink

Dolichonyx oryzivorus

Why Grassland Birds?



-17%
**EASTERN
FOREST BIRDS**



-23%
**ARCTIC
TUNDRA BIRDS**



-29%
**WESTERN
FOREST BIRDS**



-33%
**BOREAL
FOREST BIRDS**



-37%
SHOREBIRDS



-53%
**GRASSLAND
BIRDS**



*“32 of 37 North American grassland associated species are in decline”
American Breeding Bird Survey*

The presence of native birds is an indicator of ecosystem wellbeing!

Grasshopper Sparrow
Ammodramus savannarum





Loggerhead Shrike
Lanius ludovicianus

Why the Decline?



Native Grasslands



Grazing



Wildfires



Cultural Burns



90% of Virginia's Native Grasslands have been lost...



Grassland Birds have found surrogate habitat on agricultural lands!

85% of all remaining grasslands in the U.S. are privately owned



Some grassland bird species nest directly on the ground



Agricultural Changes



Land Use Changes



VGBI's Conservation Goals

Conservation Goals

- Raise awareness about the plight of grassland birds.
- Identify science-based best management practices that benefit grassland birds, landscape resiliency, and farm production goals.
- Assist producers and landowners in adopting bird-friendly practices.
- Unify conservation messaging and technical assistance advice across regional conservation practitioners.
- Create opportunities for training and dissemination of knowledge.
- Place Virginia on the map as a nationally-recognized region of bird conservation.



VGBI Assistance

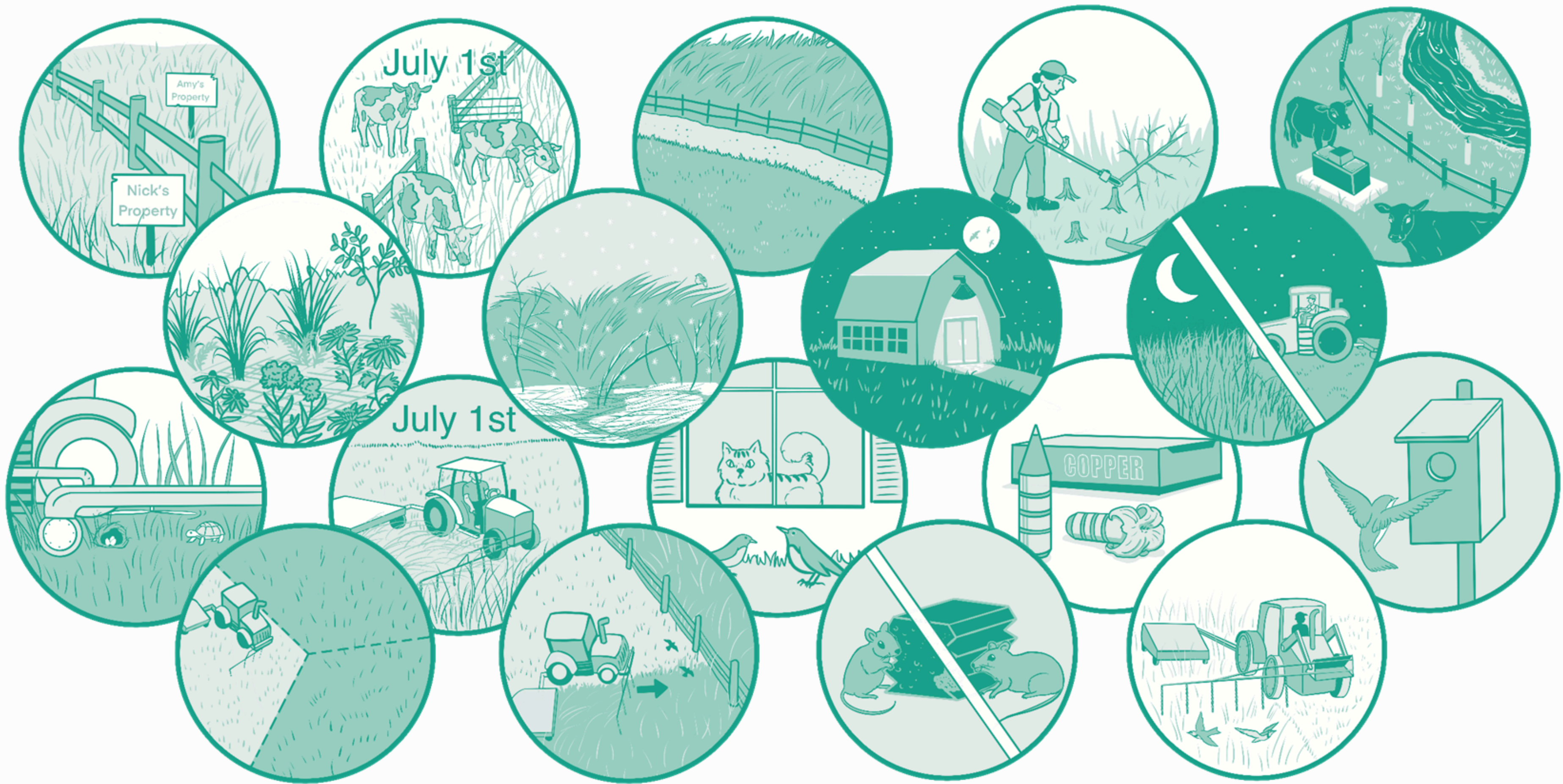


One-on-one
Site Visits

Incentives Program

Educational Workshops

Nest Box Program



Field Management Risk Calendar for Grassland Birds

Updated: April 2021



Bobolink

Green Zone

Management season: optimal time for field management, especially if field is only managed once per year.

Red Zone

Peak Breeding season: includes peak nesting period for many grassland species resulting of >90% mortality of nestlings if mowed during this time.



Yellow Zone

Conservation season: includes early season growth of vegetation for breeding birds and maintenance of vegetation structure for overwintering birds.



Eastern Meadowlark

Illustrations by Olivia Cosby

Dark Orange Zone Extended Breeding season:

includes timeframe for early- (e.g. Eastern Meadowlarks) or late-season nesters (e.g. American Goldfinches).

Light Orange Zone

Active season: includes timeframe when birds are using fields as stopover sites and fueling up for migration.

***Late season hay can be used for bedding hay, fodder for mature livestock, or mulch. Some benefits of late-season hay harvesting include the protection of fledglings and nesting site habitat for rare grassland bird species and shorter hay drying times.**

Delayed Spring Haying

How it works: Delay the first spring cutting of hay on select fields until July 1 or later and withhold livestock, tractor/UTV activity, and other disturbances such as herbicide and fertilizer applications during this time.

Benefits: Allows producers to strategically spread out labor requirements and could lead to marketing potential to label farms and products as “bird-friendly.” Higher fiber, more mature hay is suitable for feeding dry cows, horses, and retired animals, as well as for mushroom hay and bedding. The land stays eligible for agricultural land use tax deferral.



April

May

June

July



Summer Pasture Stockpiling

How it works: Rotate cattle off select fields by April 15 and withhold livestock, tractor/UTV activity, mowing, and other disturbances such as herbicide and fertilizer applications until July 1 or later.

Benefits: Bridges the summer dormancy gap by providing standing forage in late summer without the risk and cost of planting summer annuals. Provides the opportunity to rest and prepare other fields for fall/winter stockpiling with the goal of reducing hay feeding days and annual feed cost.



April

May

June

July



Incentives Program



Nick Garnhart

Number of farmers participated	57
Number of counties represented	14
Acreage enrolled in program	4,000+
Voluntarily Participating Acreage	3,000+



American Kestrel
Falco sparverius

Nest Box Program

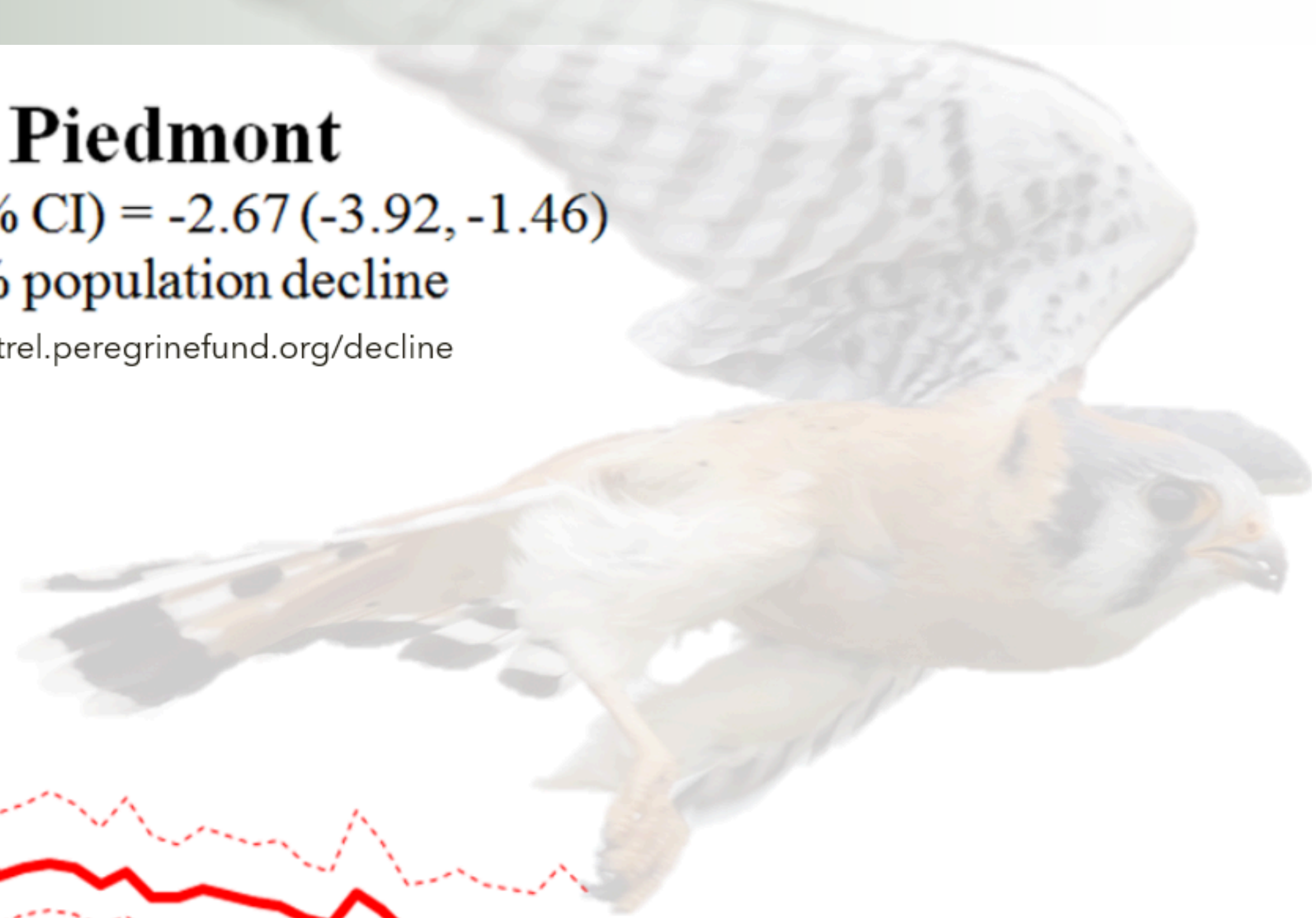


Piedmont

Trend (95% CI) = -2.67 (-3.92, -1.46)

73% population decline

<https://kestrel.peregrinefund.org/decline>

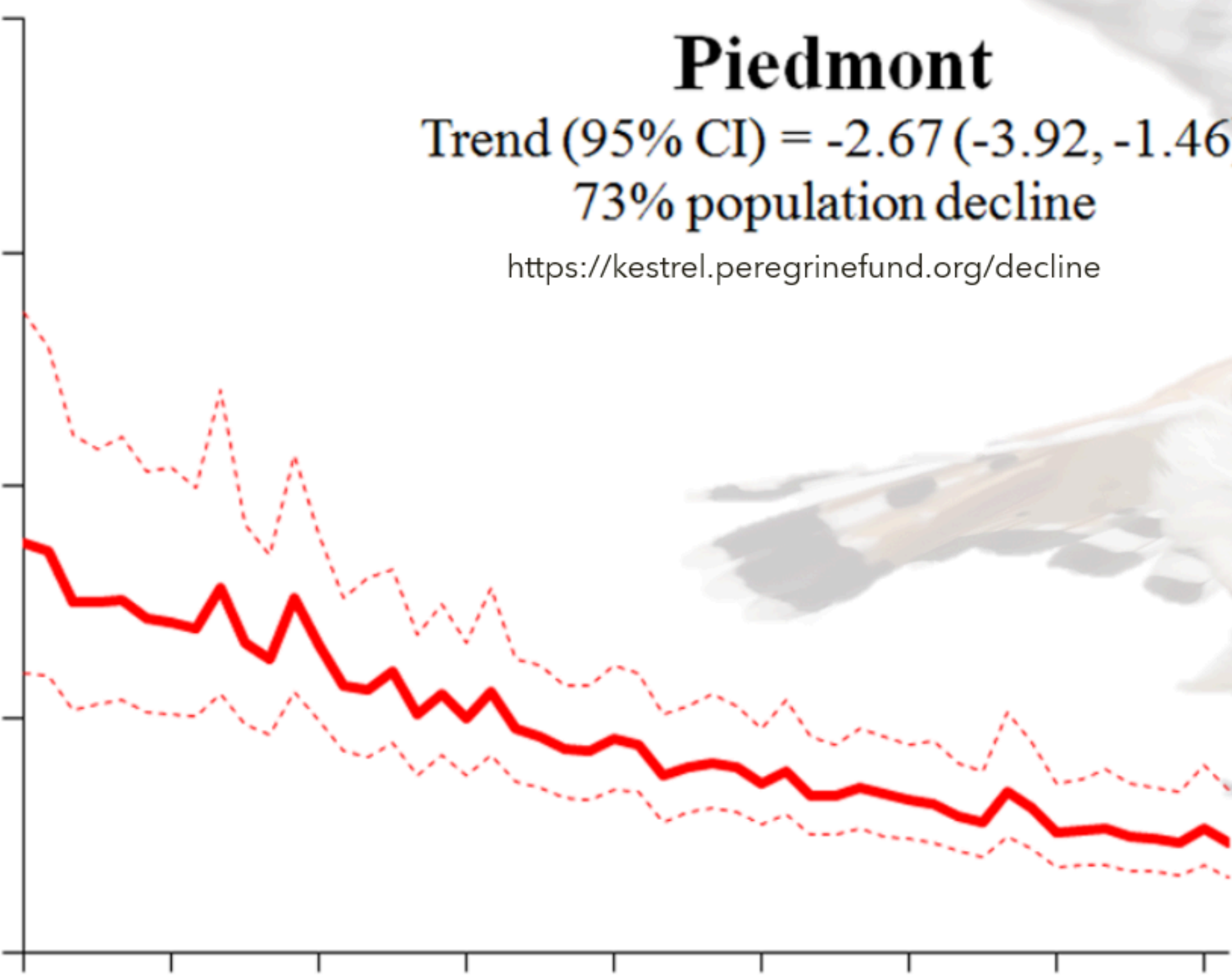


Kestrels per BBS route

1.00
0.75
0.50
0.25
0.00

1966 1972 1978 1984 1990 1996 2002 2008 2014

Year





Kestrel Box Installations

Brooke McDonough



Kestrel Box Monitoring





Kestrel Banding



What if I don't have fields or pastures?

What if I have a small property?

What if I'm not involved in agriculture?

What if my land is mostly wooded?

Can I still help bird populations?



Yes!

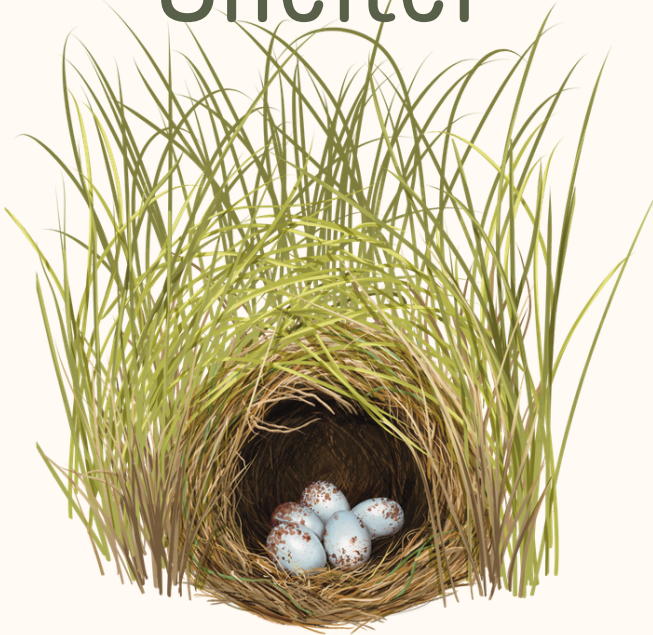
Plant native and manage
plantings as habitat!



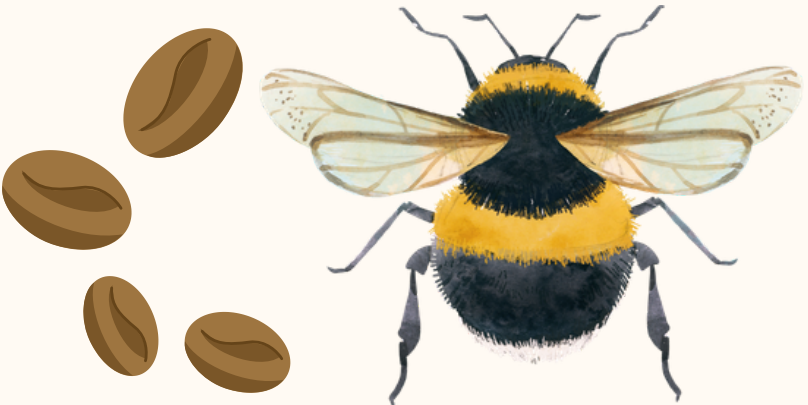
Eastern Meadowlark



Shelter

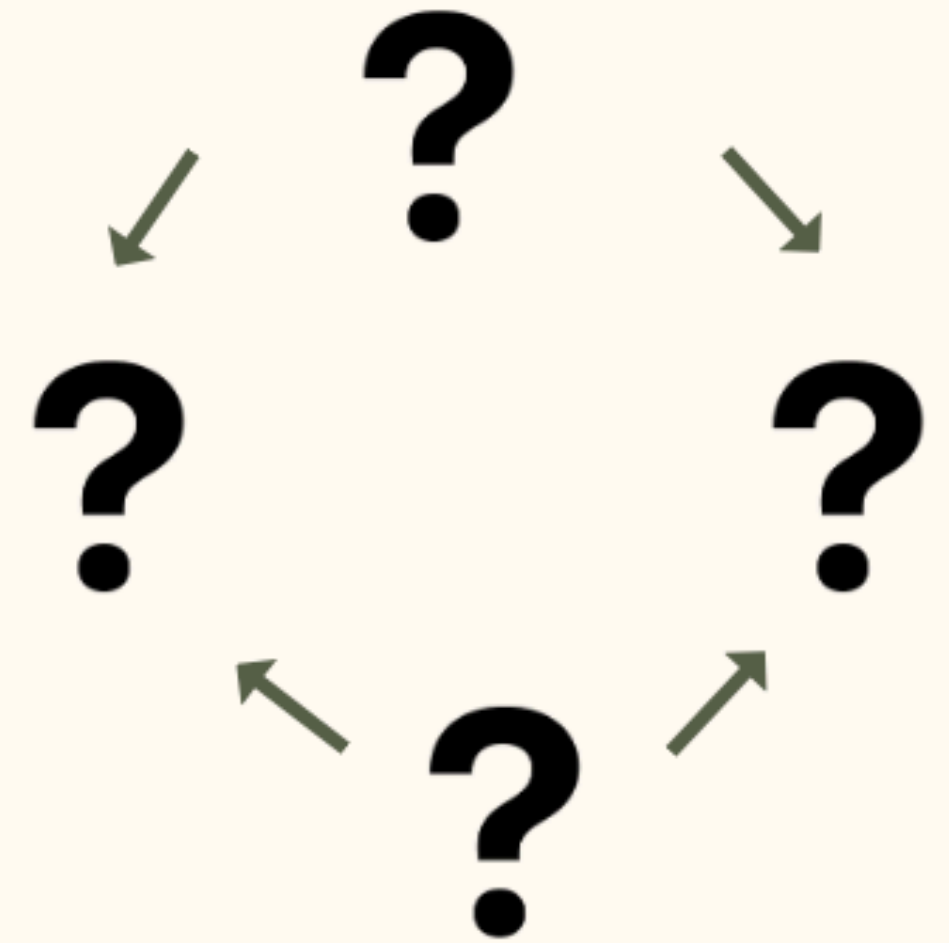
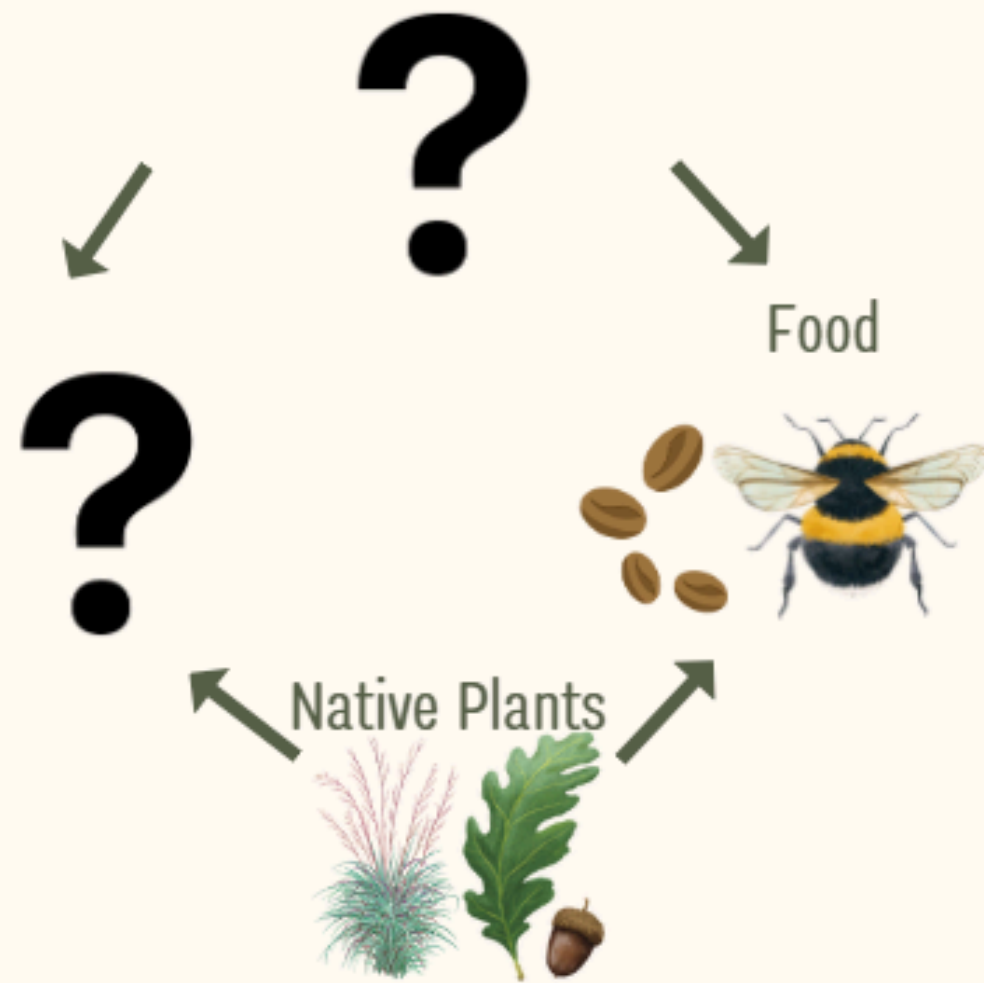
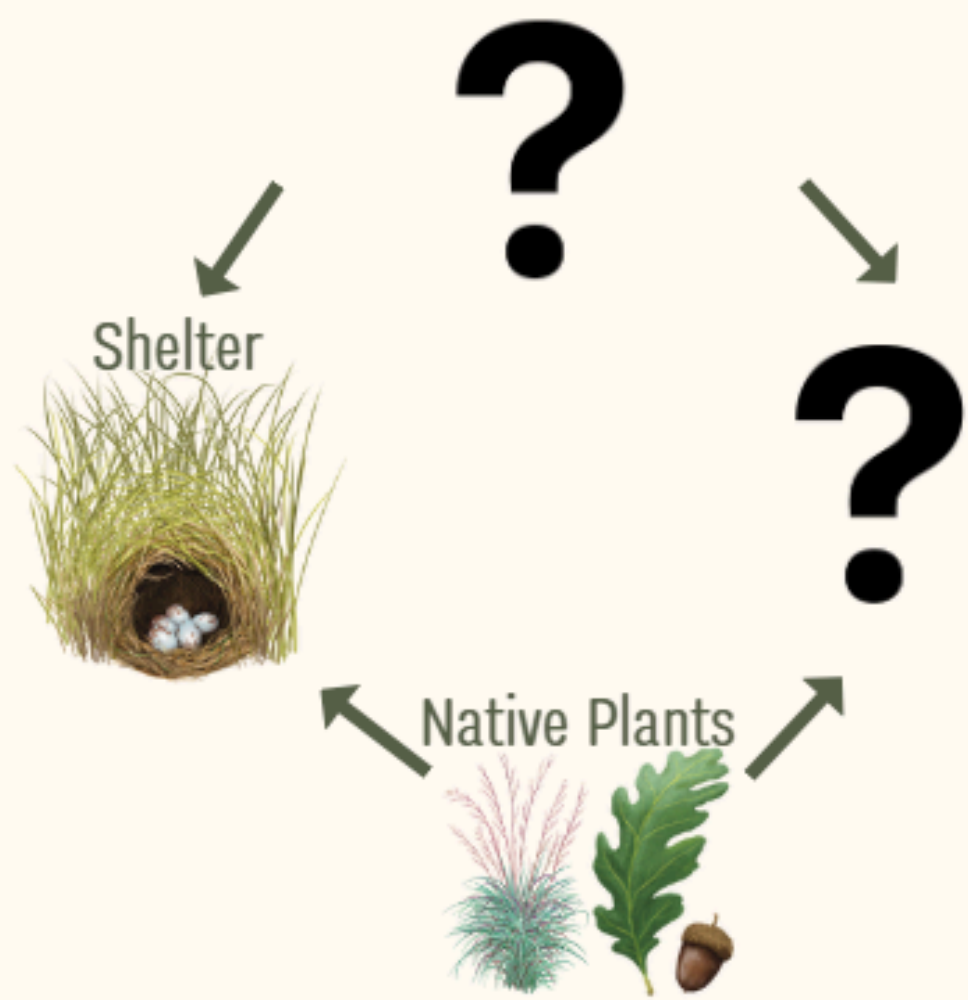


Food



Native Plants

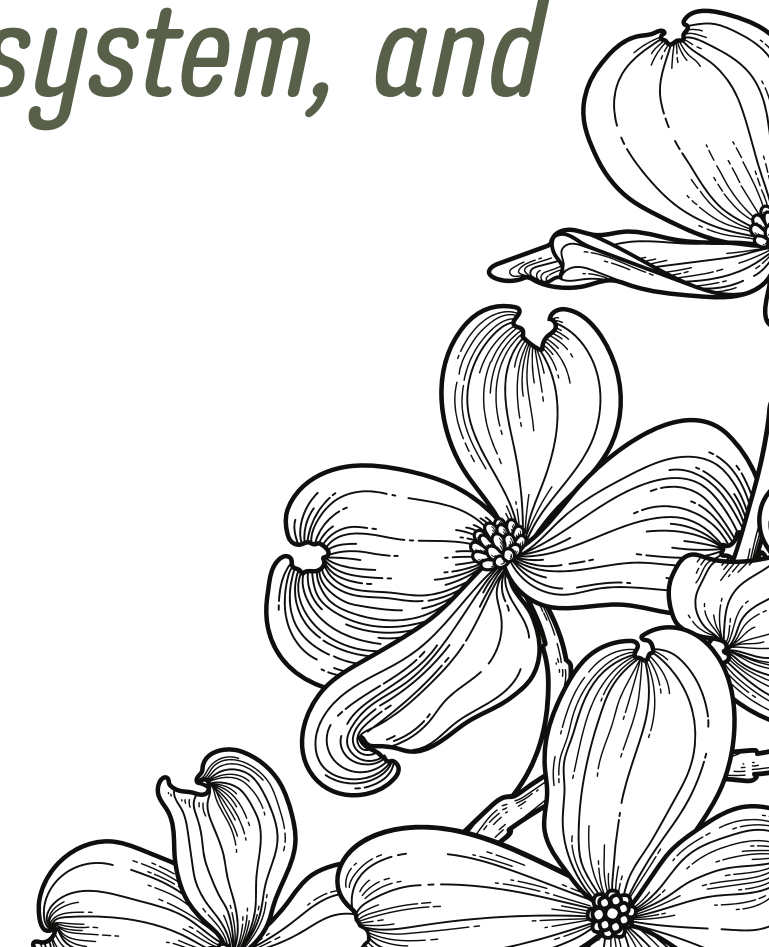


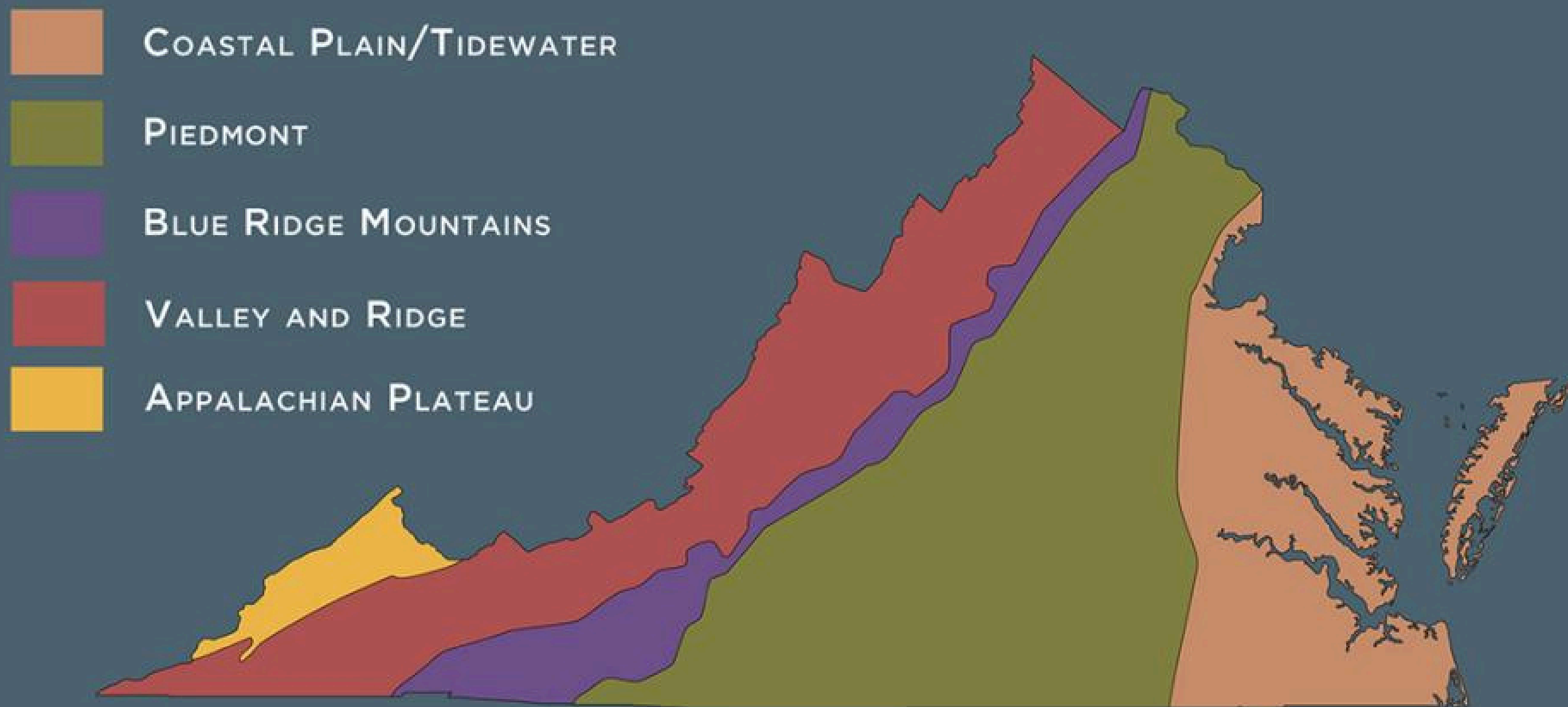




What's a Native Plant?

“Native plants are the indigenous terrestrial and aquatic species that have evolved and occur naturally in a particular region, ecosystem, and habitat.” - Department of Forestry



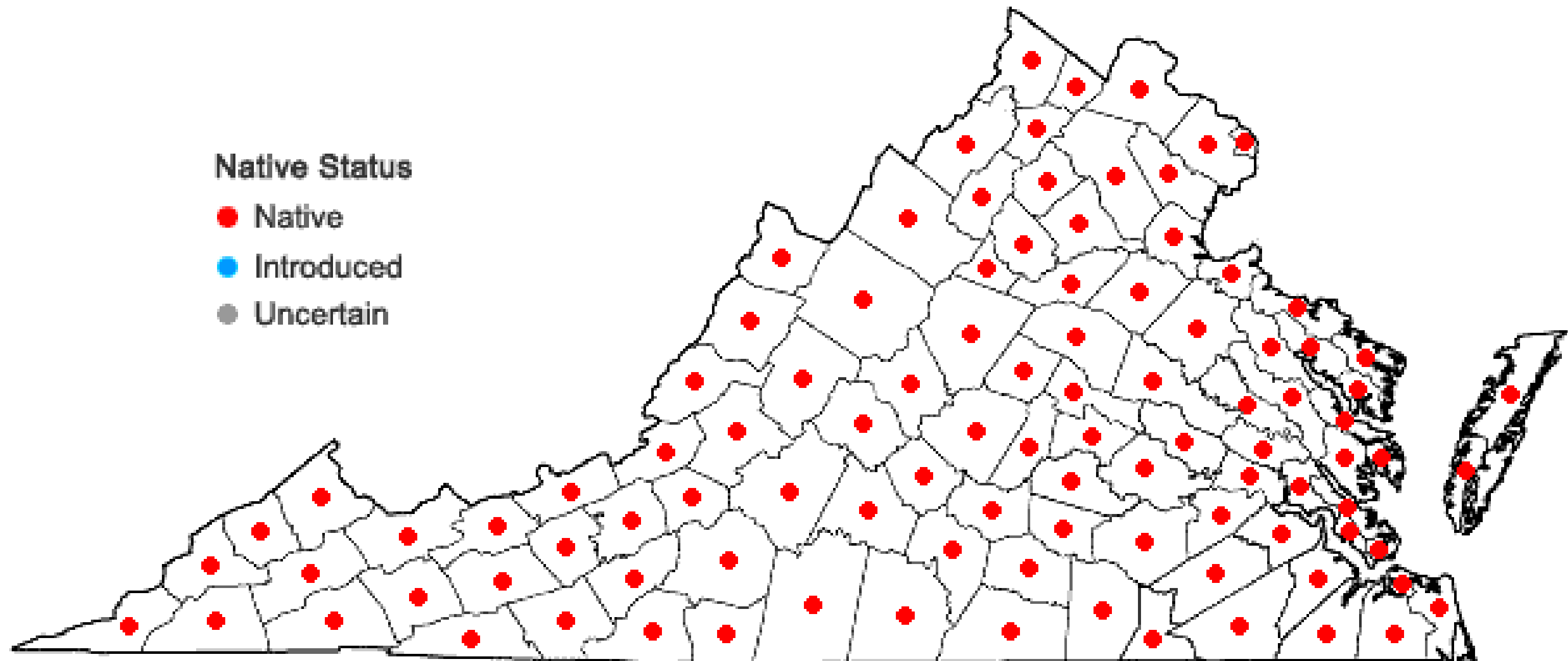


THE FIVE REGIONS OF VIRGINIA

Virginia Museum of History and Culture

Quercus alba

White Oak



Resources



Virginia Native Plant Society

- Virginia native plant Guides
- Free printable pdfs



Virginia Digital Atlas

- Flora of Virginia App
- Search plants for native status and range across state

The Biota of
**North
America**
Program



Flora of Virginia App

- Search plants for native status and range across North America

Why Native Plants?

“Planting native species is a great way to not only attract birds to a property, but also provide critical food and shelter for birds and other wildlife. Without native plants our native insects would not have enough food – just one native oak can support over 500 species of caterpillars. ~ Audubon Society

Caterpillars are a critical food source for over 96% of songbirds -National Wildlife Federation

Carolina chickadees requires between 6,000 and 9,000 caterpillars to successfully raise just one brood of young -American Bird Conservancy

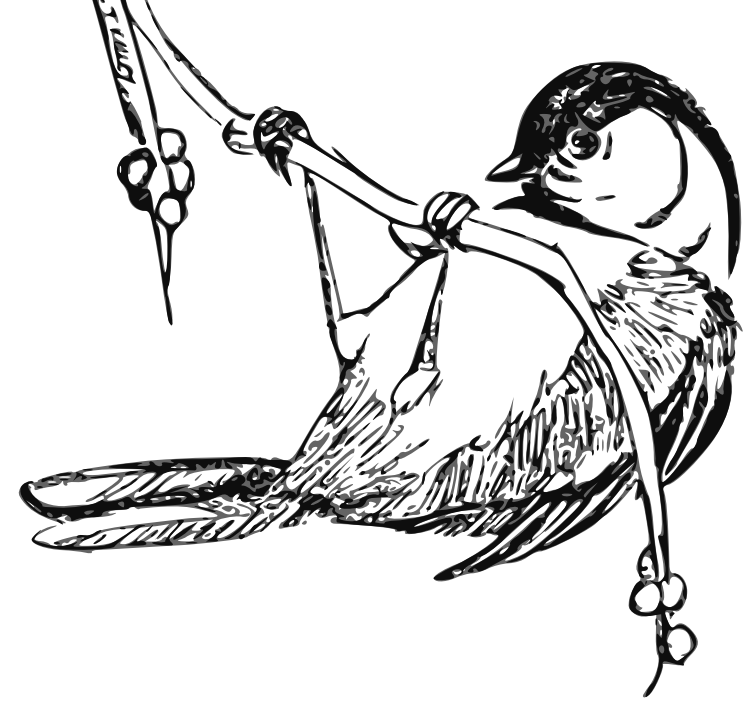




Native Plant



Seeds/Fruits



Flowers



Insects



Why Native Plants?



vs



Ginkgo biloba hosts **5** species

Fagus grandifolia hosts **126** species

Why Native Plants?



vs



Nandina domestica = **Poisonous**

Viburnum trilobum = **Edible!**

Why Fall and Winter?

1. Birds that migrate during fall need fuel



Bobolink



Indigo
Bunting



Eastern
Kingbird



Grasshopper
Sparrow

Why Fall and Winter?

2. Birds in Virginia during winter need consistent food sources



Why Fall and Winter?

3. Insects overwintering in leaf litter, stems, soil and trees



Wasps



Honeybees



Bumblebees



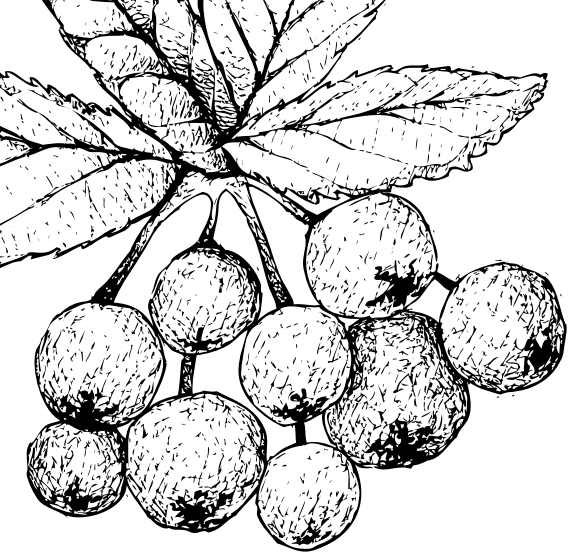
Ants



Lady Beetles



Moths



What is a native seedhead garden?


Simply put it is a garden that provides seeds and fruits throughout the fall and winter as a resource for native wildlife!





What is a native seedhead garden?

Two steps for a successful native seed head garden:

1. Planting natives to your region that hold onto seeds and fruit
 2. Maintaining your garden as a habitat for wildlife
- 

Planting Seed Head Gardens



Trees

American Sycamore



Platanus occidentalis

Red Cedar



Juniperus virginiana

Virginia Pine



Pinus virginiana

Persimmon



Diospyros virginiana

American Holly



Ilex opaca

Sweet Birch



Betula lenta

Willow Oak



Quercus phellos

Redbud



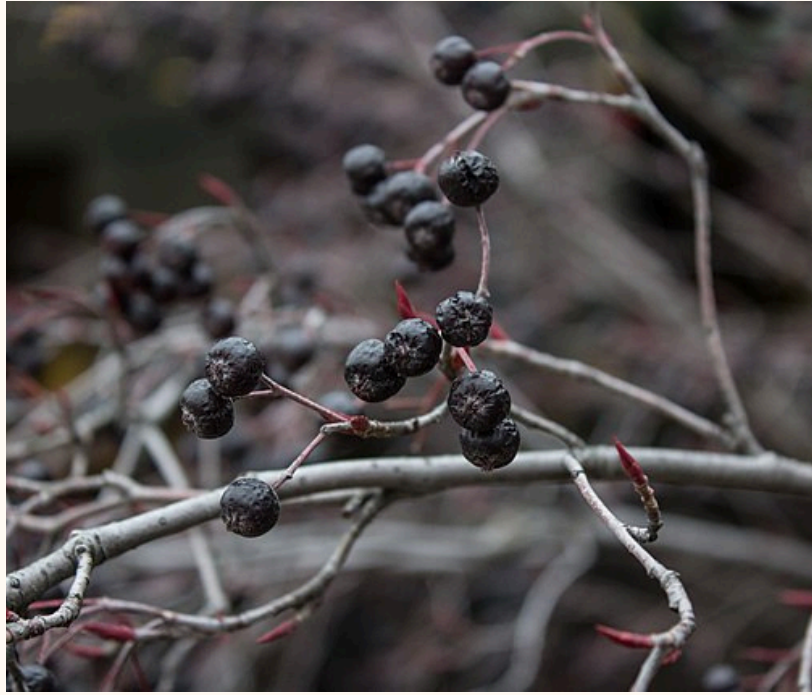
Cercis canadensis

Planting Seed Head Gardens



Shrubs

Black Chokeberry



Aronia melanocarpa

Red Chokeberry



Aronia arbutifolia

Cranberrybush Viburnum



Viburnum trilobum

Blackhaw Viburnum



Viburnum prunifolium

Winterberry



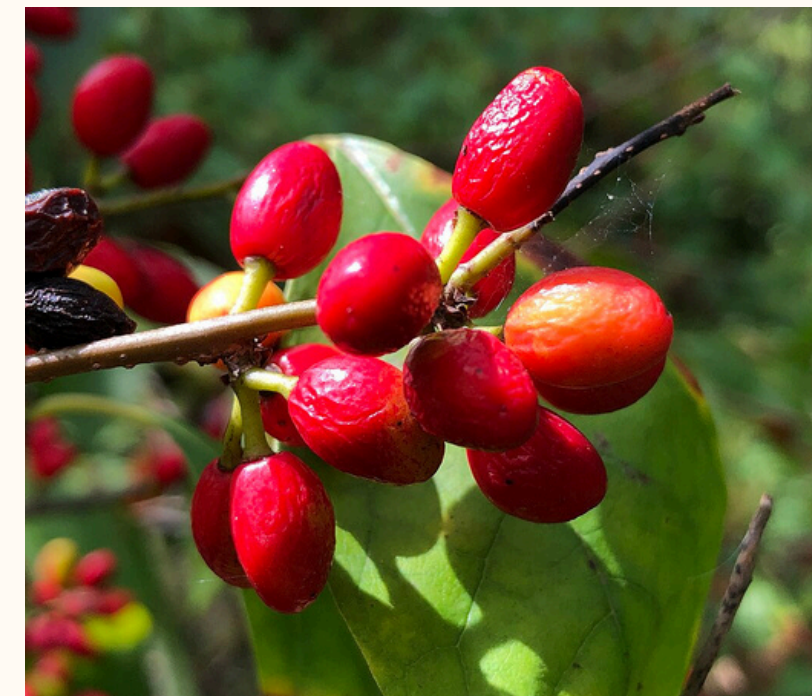
Ilex verticillata

Inkberry



Ilex glabra

Spicebush



Lindera benzoin

Meadowsweet



Spiraea latifolia

Planting Seed Head Gardens



Perennials

Wintergreen



Gaultheria procumbens

Black-eyed Susan



Rudbeckia hirta

Wild Bergamont



Monarda fistulosa

Common Goldenrod



Solidago canadensis

Blazing Star



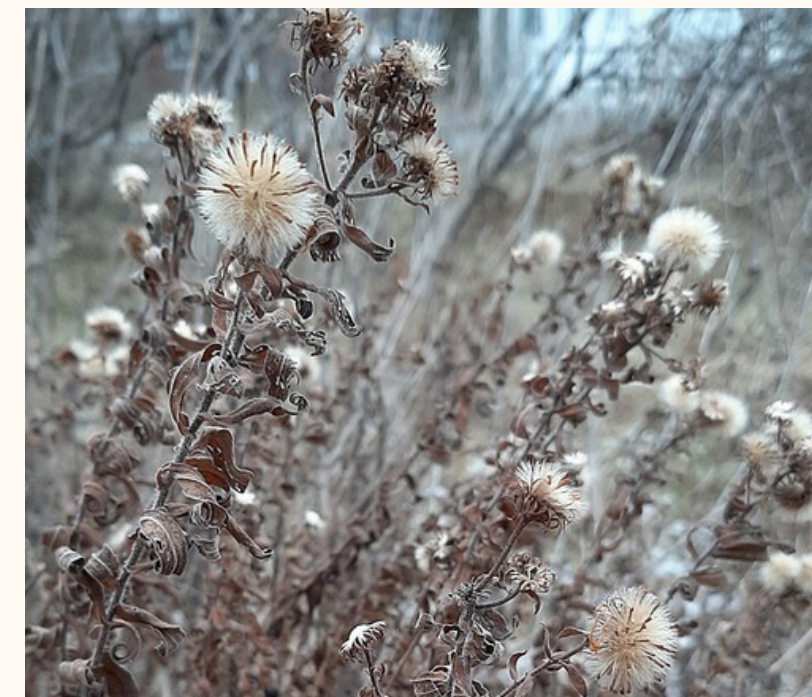
Liatris spicata

Joe Pye Weed



Eupatorium purpureum

New England Aster



symphyotrichum novae-angliae

Smooth Oxeye



Heliopsis helianthoides

Planting Seed Head Gardens



Hedges, Sedges and Rushes

Purpletop



Tridens flavus

Big Bluestem



Andropogon gerardi

Little Bluestem



*schizachyrium
scoparium*

Appalachian Sedge



Carex appalachica

Purplelove grass



Eragrostis spectabilis

Common Wood Sedge



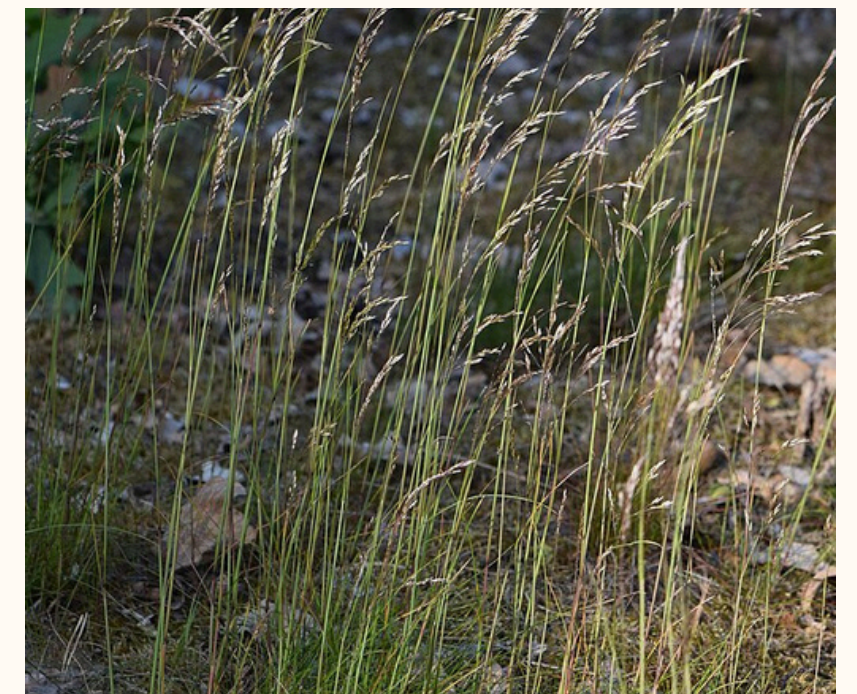
Carex blanda

Bottlebrush Grass



Elymis hystrix

Woolgrass



Scirpus cyperinus

Maintaining Seed Head Gardens



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Bobolink

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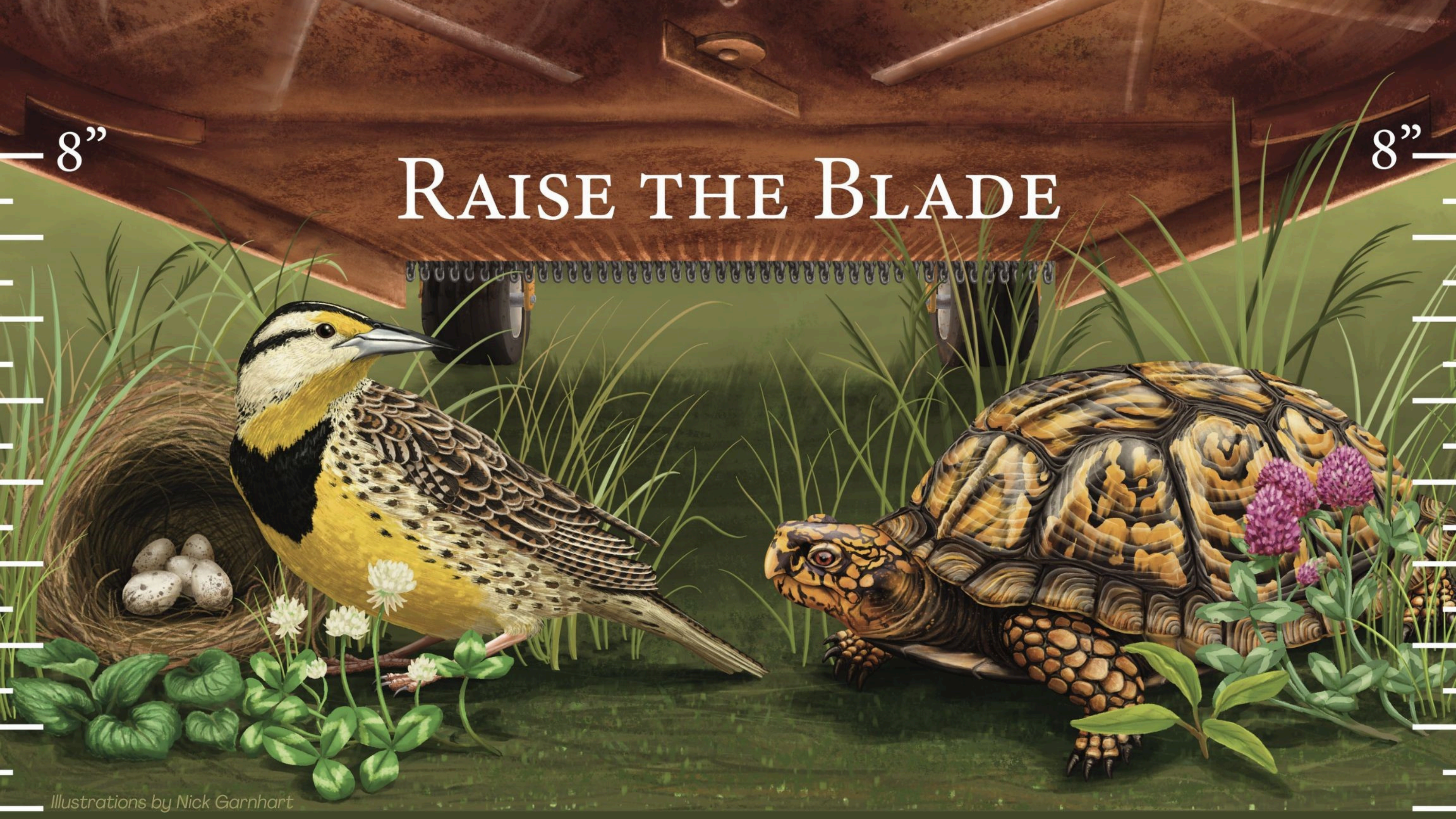
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8"

RAISE THE BLADE

8"



Leave the Leaves

Queen Bumble Bee



Lepidopterans



Amphibians & Reptiles



Save the Stems



Overwintering
hymenopterans



Stem in fall and
winter



Seed heads still
available

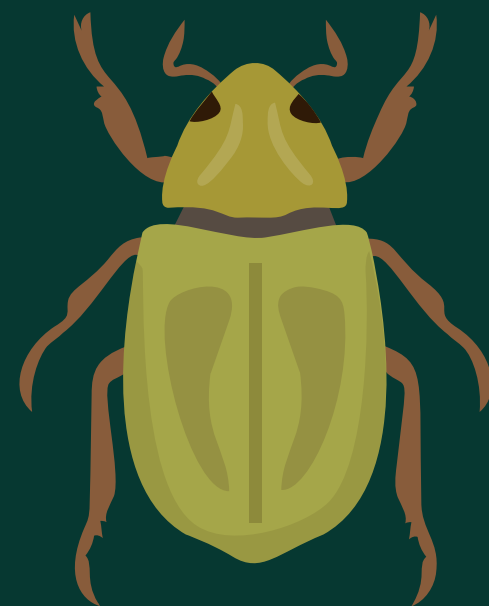
Limit use of pesticides



Rodenticides



Insecticides



Native Gardens & Proper

Maintenance=

HABITAT





Piedmont
Environmental
Council

Thank You!

Questions?

Presentation by:

Lauria McShane

*The Piedmont Environmental Council
Wildlife Habitat Outreach Specialist*

Links

pecva.org

vagrasslandbirds.org

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