It’s for the Birds!
How to Make Your Yard Bird Friendly

New Hope Audubon Society

www.Newhopeaudubon.org


Audubon
Audubon protects birds
and the places they need,

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From the New York Times: "The Crisis for Birds Is a Crisis for Us All"

"Nearly one-third of the wild birds in the United States and Canada (2.9 billion birds) have vanished since 1970, a staggering loss that suggests the very fabric of North America's ecosystem is unraveling."

"Birds are indicator species, serving as acutely sensitive barometers of environmental health, and their mass declines signal that the earth's biological systems are in trouble."

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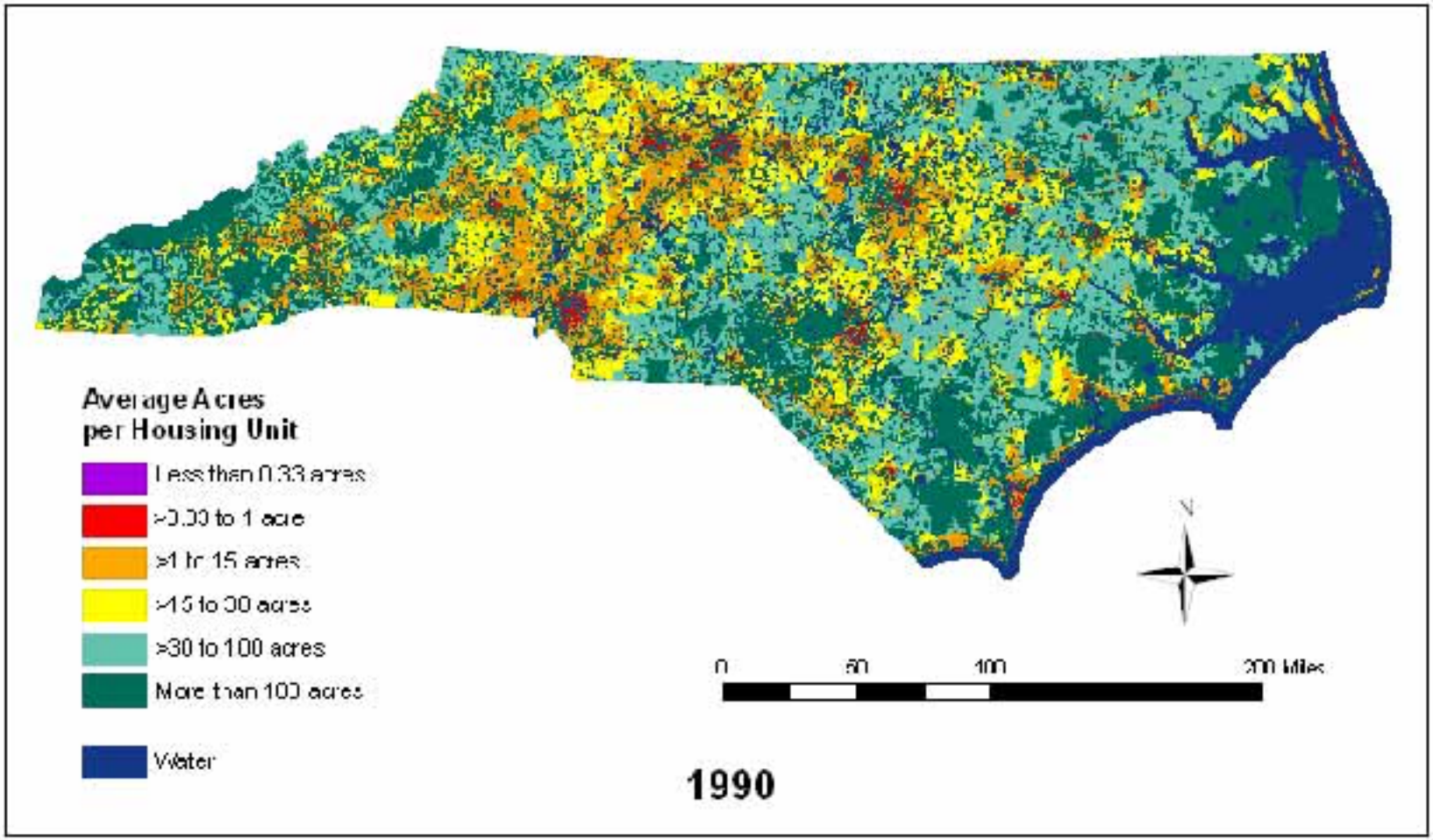

Will Stuart

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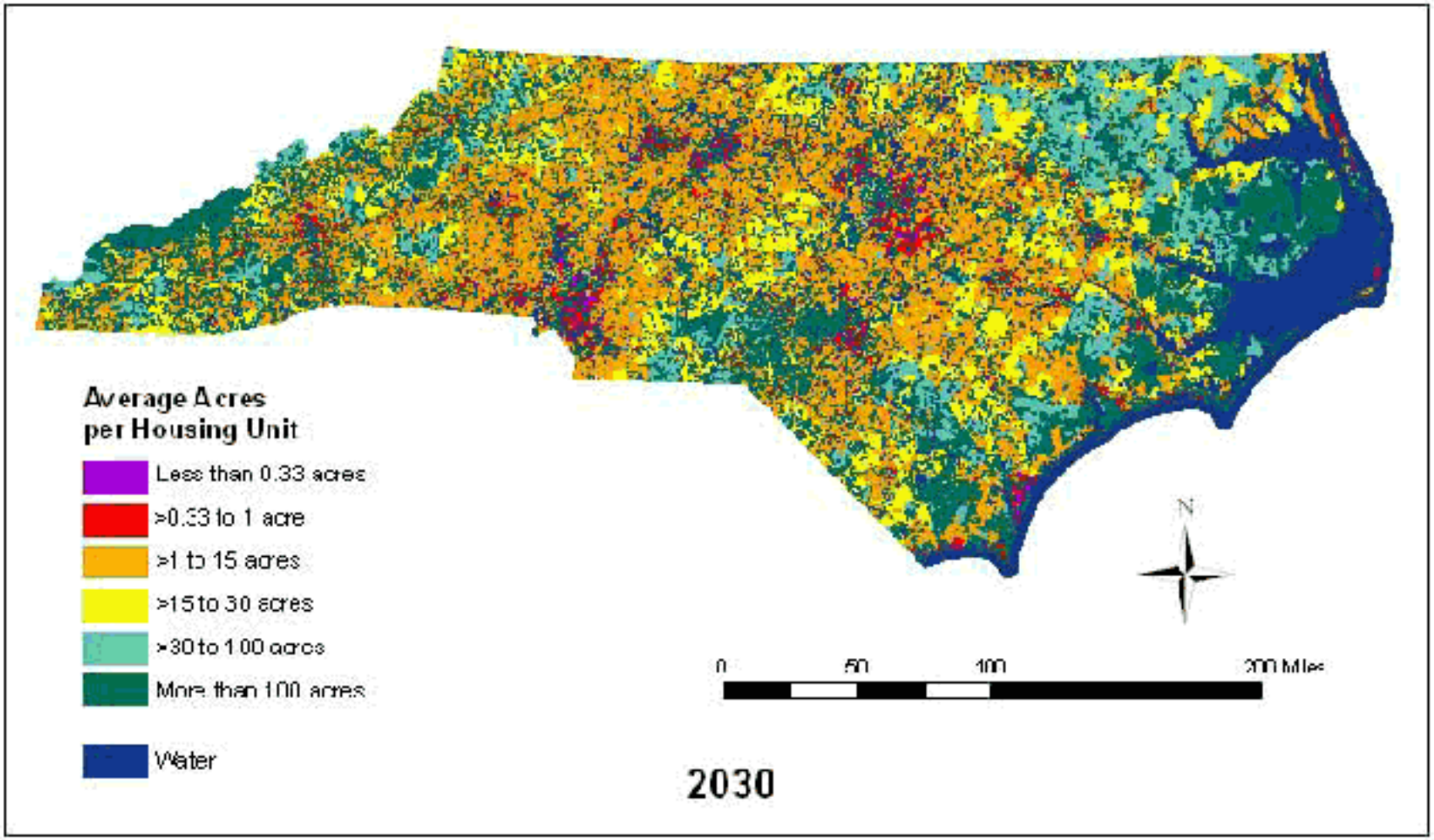
Projected Housing Density



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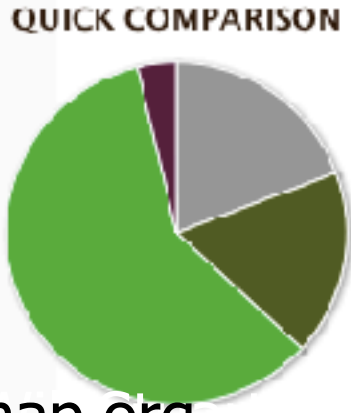
80% of plants non-native



yardmap.org

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Unfortunately, many yards look like this, which means little food for birds.

Mr. Throk, Flickr Creative Commons

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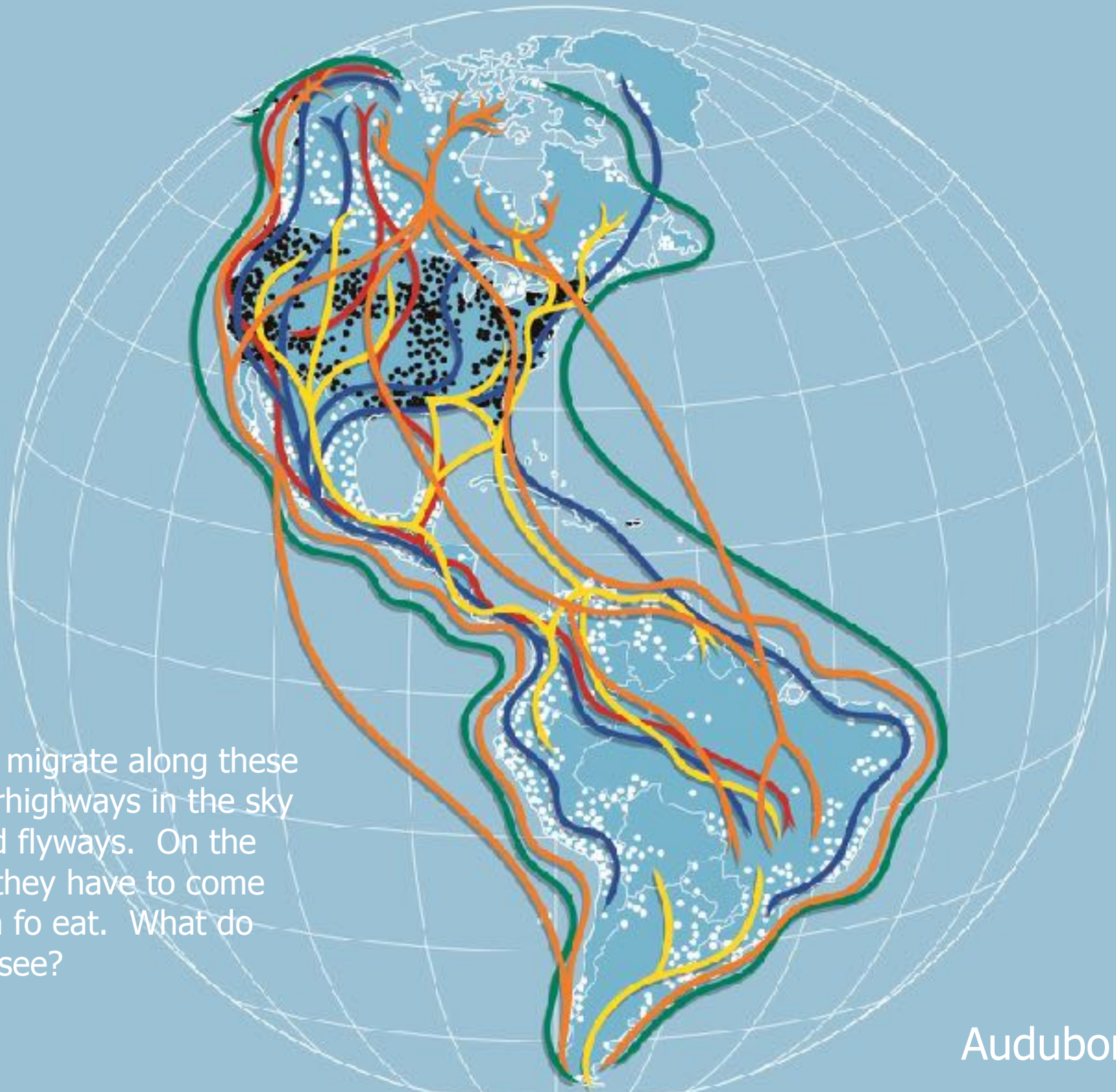
Migration

Migration is the most dangerous thing a bird will ever do.

Predation risks are high.

Migrants lose up to 35% of their body weight while crossing the Gulf of Mexico.

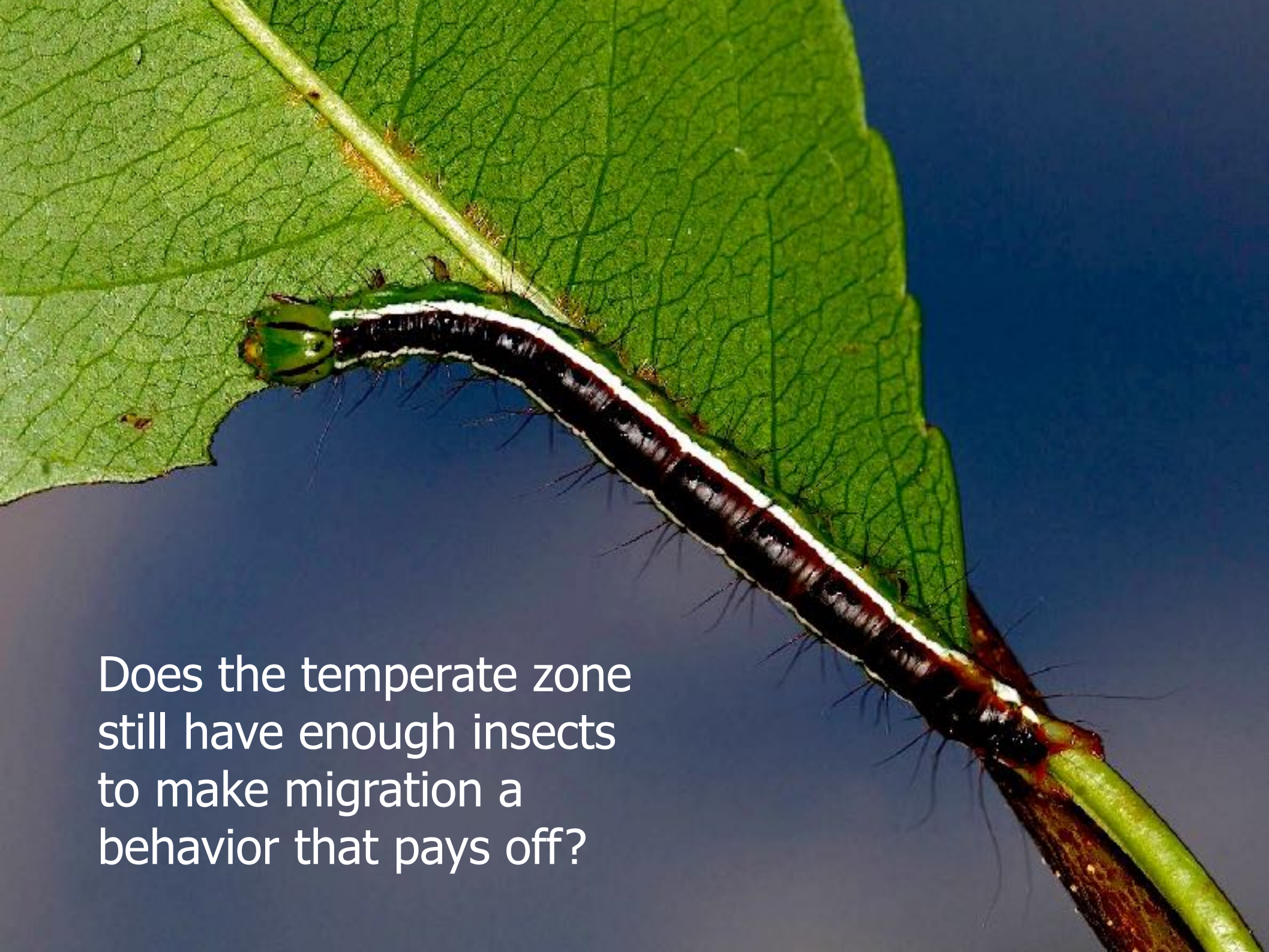


Birds migrate along these superhighways in the sky called flyways. On the way they have to come down fo eat. What do they see?

National Audubon Society

Even over land migrants must refuel as they go. They must stop and eat 35-50% of their body weight in insects at each rest stop.

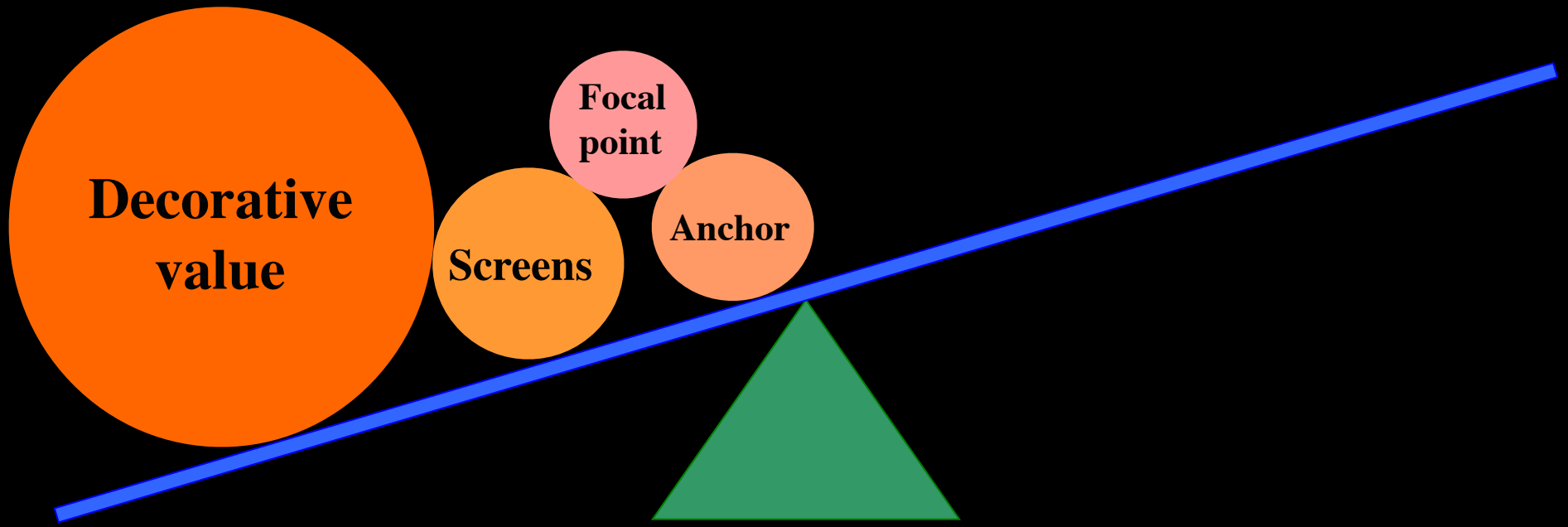

When birds evolved to migrate, the temperate zone had plenty of insects.


Does the temperate zone
still have enough insects
to make migration a
behavior that pays off?

In most places

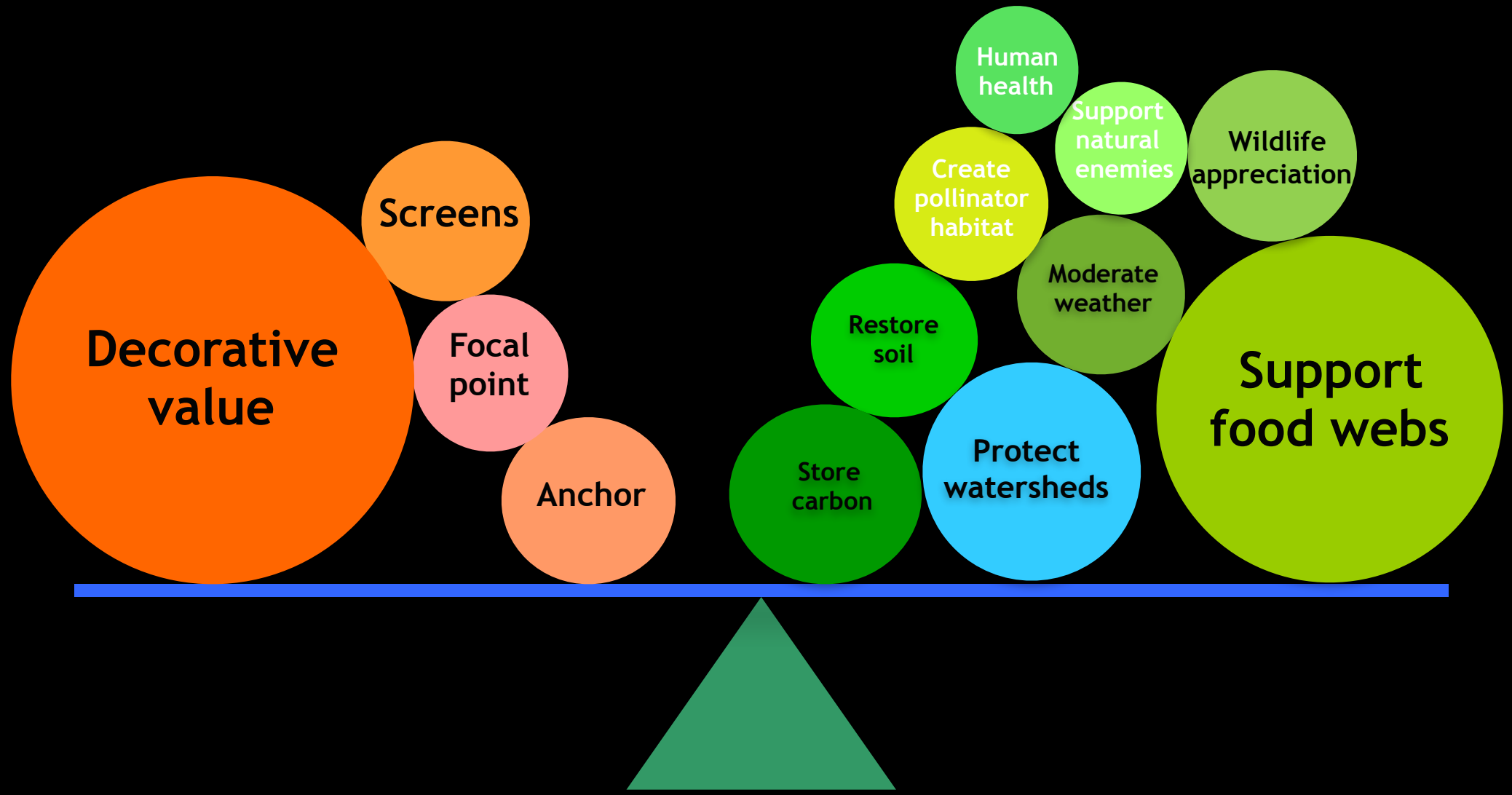
NO

because we kill insects every chance we get, and we have traded the plants that make insects for plants that don’t.



Past criteria for choosing plants for our landscape


When we think of plants only as decorations,
landscaping = ecological destruction.



Future criteria for choosing plants for our landscape

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The Bird-friendly Yard

Vegetative layers
Food
Water
Shelter
Nesting sites

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- Vegetative layers are important because they provide food, shelter, and cover for birds.
- Canopy
- Understory—smaller trees
- Shrubs
- Herbaceous plants
- Ground cover

Mockingbird on Winterberry

Will Stuart

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Four food groups for birds:

- Insects
- Berries & fruits
- Nuts & seeds
- Nectar

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Insects

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Baby birds need insects!

Prothonotary Warbler - Chuck Carmack

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5,000 caterpillars for one chickadee brood

Carolina Chickadee - Will Stuart




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Prothonotary Warbler by Will Stuart

Top 10 trees for caterpillar production

Oak	534
Willow	456
Cherry	456
Birch	413
Crabapple	311
Blueberry	288
Maple	285
Pine	203
Hickory	200
Hawthorn	159

http://www.bringingnaturehome.net/what-to-plant.html

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#1: Oak—534 species

Will Stuart

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#2: Willow—456 species

Viceroy Caterpillar
Mary Keim
Flickr Creative Commons

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#3: Cherry—456 species

Orchard Oriole
Black Cherry
Will Stuart

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#4: Birch—413 species

Polyphemus moth

Mourning Cloak

Kim Brand

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Fruits & berries

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Spicebush

Will Stuart

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Dogwood

Wood Thrush - Will Stuart

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American beautyberry

Black-throated Blue Warbler - Curtis Smalling

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Pokeweed

Gray Catbird - Will Stuart

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Chokeberry & inkberry

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Winterberry

Northern Mockingbird - Will Stuart

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Nuts and seeds

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Go nuts!

Blue Jay - Susan Phillips, wildbirdy.com

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Down the hatch!

Brown-headed nuthatch - Will Stuart

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Seeds that last

Palm warbler - Will Stuart

Will Stuart

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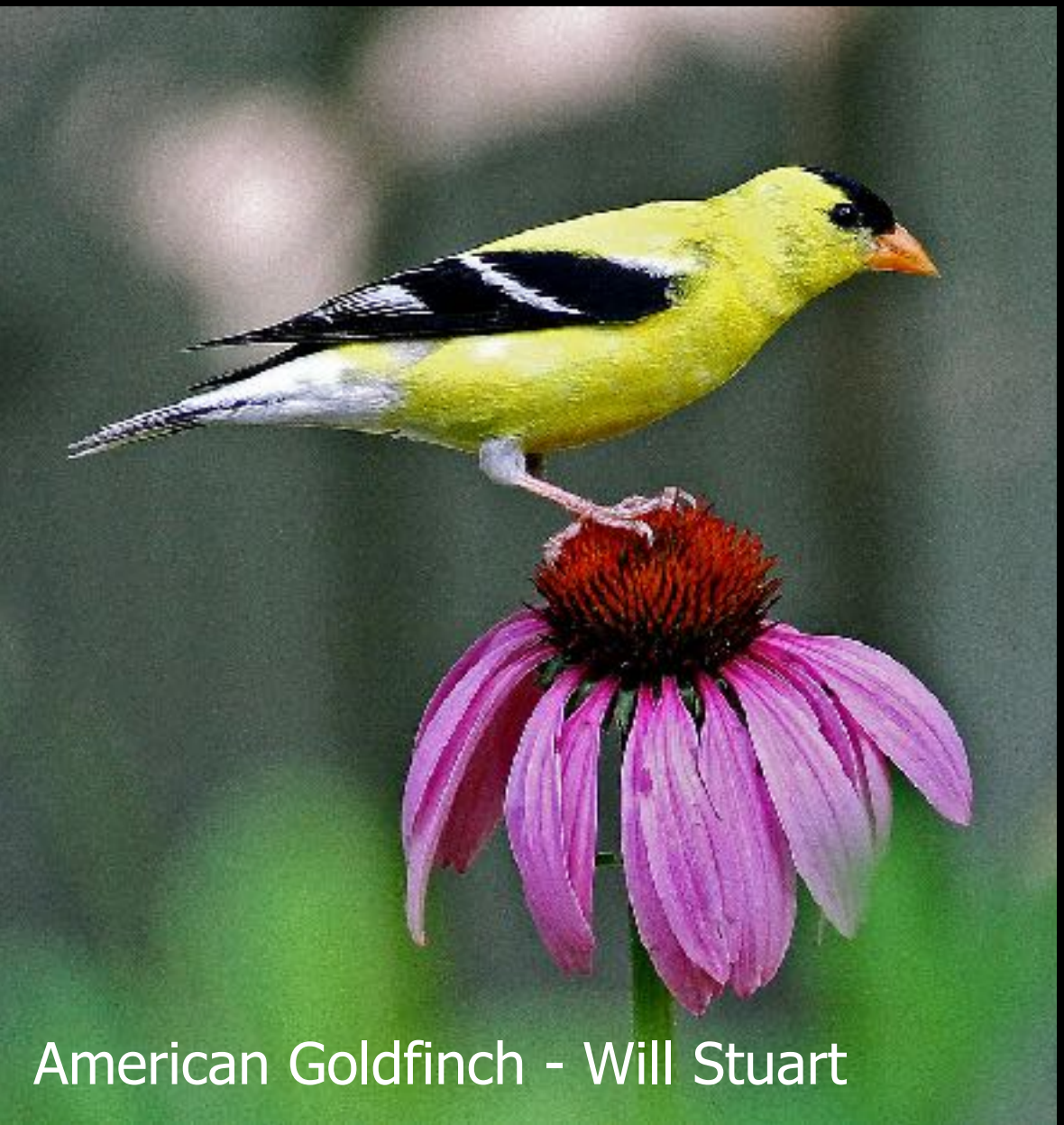
Purple coneflower



American Goldfinch - Will Stuart

EVERYTHING looks better with a bird on it.

Will Stuart

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Black-eyed Susan

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Nectar plants

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Cardinal flower

Ruby-throated hummingbird - Will Stuart

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Coral honeysuckle

Chuck Carmack

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Trumpet vine

Ruby-throated Hummingbird - Will Stuart

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Crossvine

Will Stuart

Water

Eastern Bluebird – Danny Brown/Audubon Photography Awards

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Water

Black-throated blue warbler - Jim Guyton

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Containers can hold water for birds and other wonderful things.

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Shelter and nest sites

Wood Thrush - John Gerwin

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Brush piles

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Leaf litter

- Habitat for many insect larvae, including fireflies
- Place for caterpillars, some bees to overwinter
- Important nutrients for plants and trees
- Holds moisture in soil
- Leave the leaves!

Wood Thrush
Will Stuart

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Nest boxes

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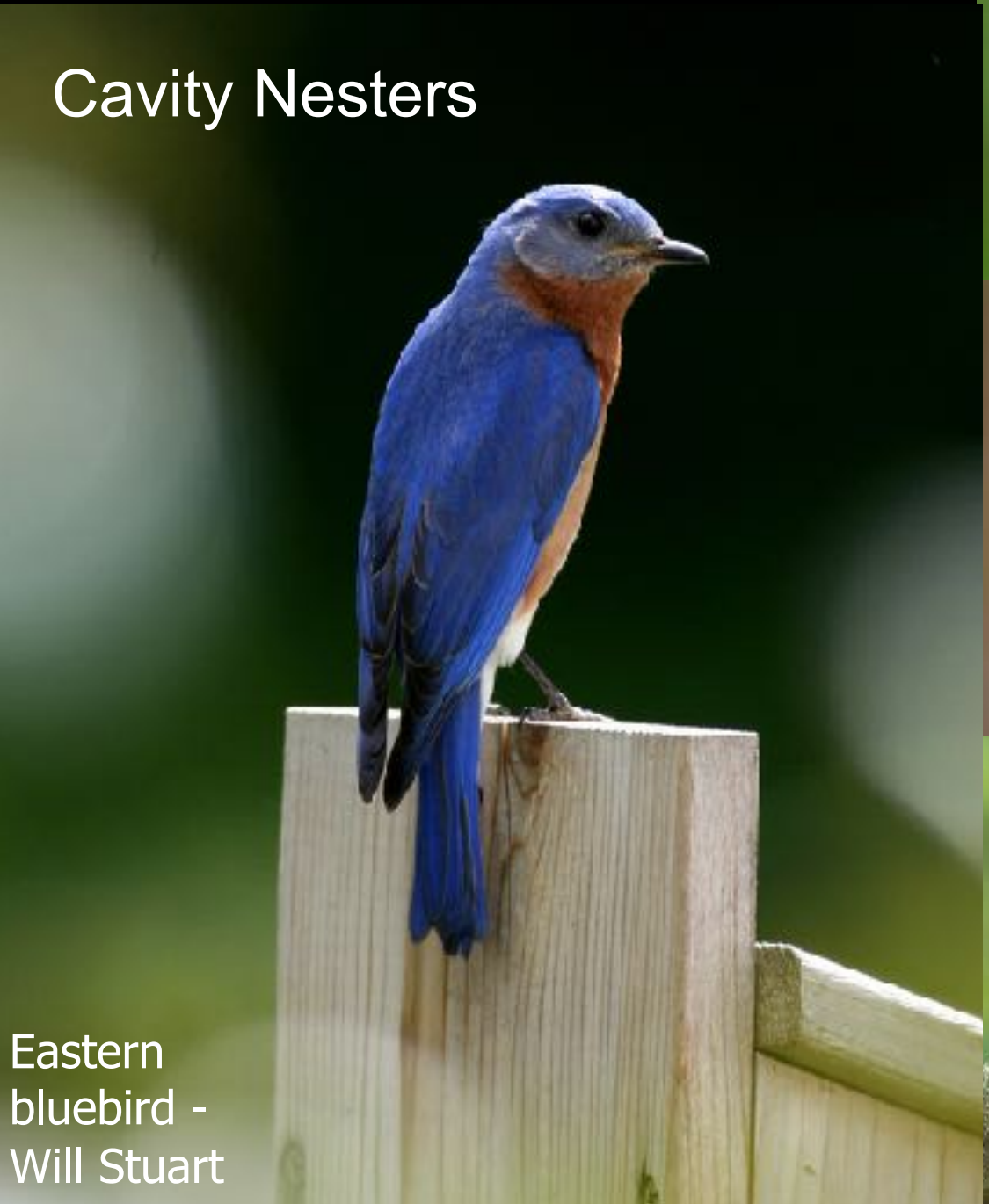
Cavity Nesters



Eastern bluebird - Will Stuart

Red-breasted nuthatch - Will Stuart

White-breasted nuthatch - Jason Paluck, Flickr Creative Commons

Brown-headed nuthatch - Kent Fiala

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- Stop window collisions!
  - Hundreds of millions of birds die each year in window collisions.
  - American Bird Conservancy has a number of different options. See their Bird-Smart Glass program for materials that have been tested and proven to prevent bird strikes: https://abcbirds.org/get-involved/bird-smart-glass/

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Cats indoors

Cedar waxwing - flyawayunlimited.com

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Or cats outdoors—the Catio

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Create a pollinator garden

- Use native plants and grasses www.carolinapollinatorgarden.org
- Choose a variety of plants that will bloom throughout the season.
- Use a mixture of nectar and host plants.
- Cluster plants of the same species.
- Include various colors of flowers.
- Don’t use insecticides—ask whether plants you buy have been treated with insecticides such as neonics.

The Bird-friendly Yard

Jill Palmer

Wildlife Habitat Options

- Wildlife water feature (ponds, bird baths, etc.)
- Cats indoors at all times or in outdoor enclosure
- Install functional bird or bat nest boxes
- Bird boxes specifically for Brown-headed Nuthatches
- Pollinator and beneficial insect nesting habitat (i.e. rock piles, bundles of stems and branches, mason bee boxes)
- Snag or nurse log
- Reduce bird window collisions
- Leaves remain in landscape/not seasonally removed (many insect larvae such as fire flies rely on leaf litter)
- Reduce lawn area maintained with non-native turfgrass to minimum needed (lawns w/ nonnative grasses require fertilizers and produce few insects for birds)
- Minimal use of nonorganic fertilizers
- No pesticides or rodenticides used
- Replace gas mowers and string trimmers with battery or electrical. Helps with air pollution and climate change.

Why natives? Our local vegetation evolved with insects, birds, and other animals to create complex food webs. Wildlife consumes fruits, nuts, and seeds for sustenance, while helping to propagate the regional vegetation. Native plants, especially some tree species like oaks, are also host to a large variety of insects, which in turn are eaten by birds and other animals. Young nestlings, in particular, must consume large numbers of insects in their first weeks of life.

Non native vegetation can provide some fruits, nuts, and seeds, but it does not host the insects that are vital to birds and the web of life. As their seeds are spread by wildlife, many non-native plants become "invasive" by outcompeting local vegetation and disrupting the local ecology.

Visit our website for complete information on:

- How to sign up for the Bird Friendly Habitat Certification program
- Why native plants are important
- Recommended native plants for the Piedmont
- Where to buy native plants in the local area
- Identifying invasive plant species
- Removing invasive plant species
- How to reduce bird-window collisions
- Options for improving wildlife habitat

Our certification program website is:
newhopeaudubon.org/birdFriendly.html

There is a one time application fee of $50 for the certification program. Upon certification, you will receive a "Certified Bird Friendly Habitat" sign to display along with a certificate. For questions, contact us at newhopeaudubon@gmail.com.

PHOTO CREDITS

Gray Catbird and Brown-headed Nuthatch by Will Blaker

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Bird Friendly Habitat Certification Program

The New Hope Audubon Society has developed a certification program to recognize your efforts in providing habitat where birds and wildlife can thrive. To be certified, you will need to: use native plants at all vegetative layers from the tree canopy down to perennials and ground cover; remove invasive plants; and take other steps to improve wildlife habitat. You can be certified at a Silver, Gold, or Platinum level by meeting the standards at that level.

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Silver Certification

- Landscape at least 20% of available property with native plants.
- Invasive plants cannot cover more than 20% of property.
- Include vegetative layers: canopy trees, understory trees, shrubs, and herbaceous layer (perennials, grasses, etc.).
- Minimize use of herbicides, pesticides, and rodenticides
- Improve wildlife habitat by choosing three of the items from the wildlife habitat list on the back of the brochure.

Gold Certification

- Landscape at least 30% of available property with native plants.
- Invasive plants cannot cover more than 15% of property.
- Include vegetative layers: canopy trees, understory trees, shrubs, and herbaceous layer (perennials, grasses, etc.).
- Minimize use of herbicides and pesticides and eliminate rodenticides
- Improve wildlife habitat by choosing five of the items from the wildlife habitat list on the back of the brochure.

Platinum Certification

- Landscape at least 50% of available property with native plants.
- Invasive plants cannot cover more than 10% of property.
- Include vegetative layers: canopy trees, understory trees, shrubs, and herbaceous layer (perennials, grasses, etc.).
- Eliminate use of herbicides (except for invasive removal), pesticides and rodenticides.
- Improve wildlife habitat by choosing eight of the items from the wildlife habitat list on back of brochure

Invasive plants to be removed for all levels of certification

All invasives ranked as Severe or Significant Threat by the North Carolina Plant Society count toward the percent of invasive plants allowed. (www.ncwildflower.org/plant_galleries/invasives_list)

Please refer to our website for information on invasive plants: www.newhopeaudubon.org

Typically seen high threat invasives:

- **Trees:** Mimosa, Tree of Heaven, Bradford Pear, Princess Tree
- **Shrubs:** Burning Bush (Winged Euonymous), Chinese Privet, Autumn Olive, Multiflora Rose, Bushclover (Lespedeza) , Thorny Olive, Nandina, Mahonia, Japanese Privet, Japanese Barberry, Japanese Spirea, Sweet Breath of Spring (Fragrant Honeysuckle)
- **Herbs & Grasses:** Japanese Stiltgrass, Sericea Lespedeza, Chinese Silver Grass (Miscanthus), Youngia, Exotic Bamboo
- **Vines:** Japanese Honeysuckle, English Ivy, Chinese/Japanese Wisteria, Oriental (Asian) Bittersweet, Winter Creeper, Sweet Autumn (Leatherleaf) Clematis, Vinca (Periwinkle)

What are invasive plants?

- Invasive plants such as English ivy and privet are not originally from North America and they cause economic and/or environmental harm.
- They have escaped cultivation and now overrun native vegetation.
- The definitive list of invasive species for North Carolina can be found on the NC Native Plant Society web site: https://www.ncwildflower.org/plant_galleries/invasives_list

Japanese stiltgrass (*Microstegium vimineum*)

Autumn olive (*Eleagnus umbellata*)

English ivy (*Hedera helix*)

90% of the insects that eat plants
can develop and reproduce
only on the plants with which they share
an evolutionary history.

(Forister et al. 2014)

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Common invasive plants used in gardening

- privet
- autumn olive—outlawed in 8 states!
- burning bush
- mahonia
- bush honeysuckles
- English ivy
- periwinkle
- winter creeper
- nandina

Ways to remove invasive plants

- Pull—make sure to remove the whole plant.
- Cardboard and mulch—good for dense ground cover such as vinca or ivy.
- Girdle—cut or remove bark on tree or shrub.
- Remove berries—do this before they ripen (nandina, for example) or cut plants back before they go to seed.
- Cut and paint—cut stem(s) to the ground and immediately paint with a 15-25% solution of glyphosate (Roundup) herbicide, found in "Ready to Use" solutions, concentrate, or superconcentrate. Dilute using water to create the correct percent solution. Always read the instructions on the label.
- For more information visit http://www.newhopeaudubon.org/

Garden centers for native plants

New Hope Audubon recommends these retail garden centers for native Piedmont plants:

- Country Farm and Home—Pittsboro
- Durham Garden Center—Durham
- Fifth Season Gardening Co.—Carrboro
- Living Landscapes—Graham
- North Carolina Botanical Garden—Chapel Hill
- Piedmont Feed & Garden Center—Chapel Hill
- Southern States—Carrboro
- Stone Brothers & Byrd—Durham
- Cure Nursery—Pittsboro

For more information, visit our website at:
tinyurl.com/audubon-plants

Audubon.org/plantsforbirds

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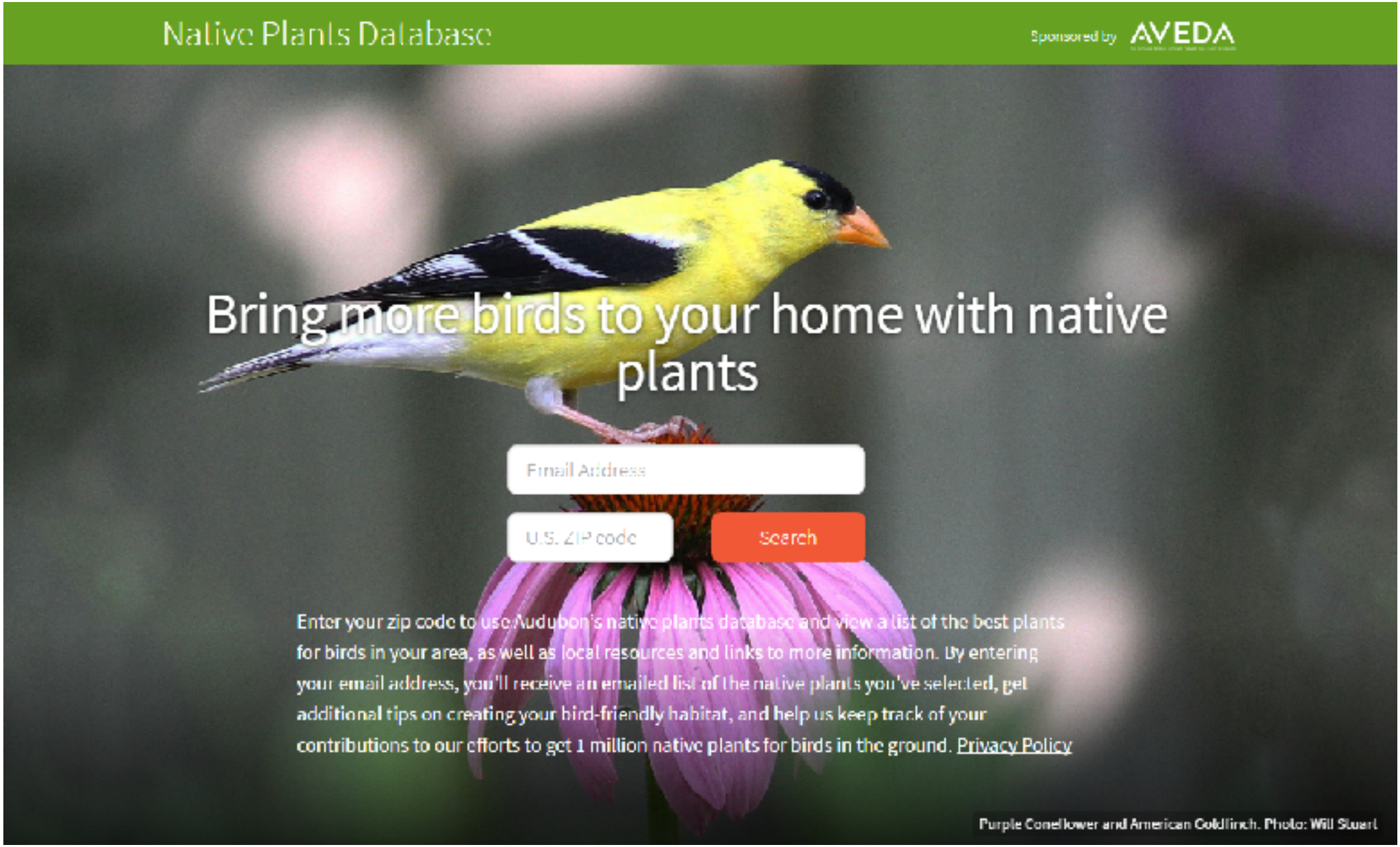
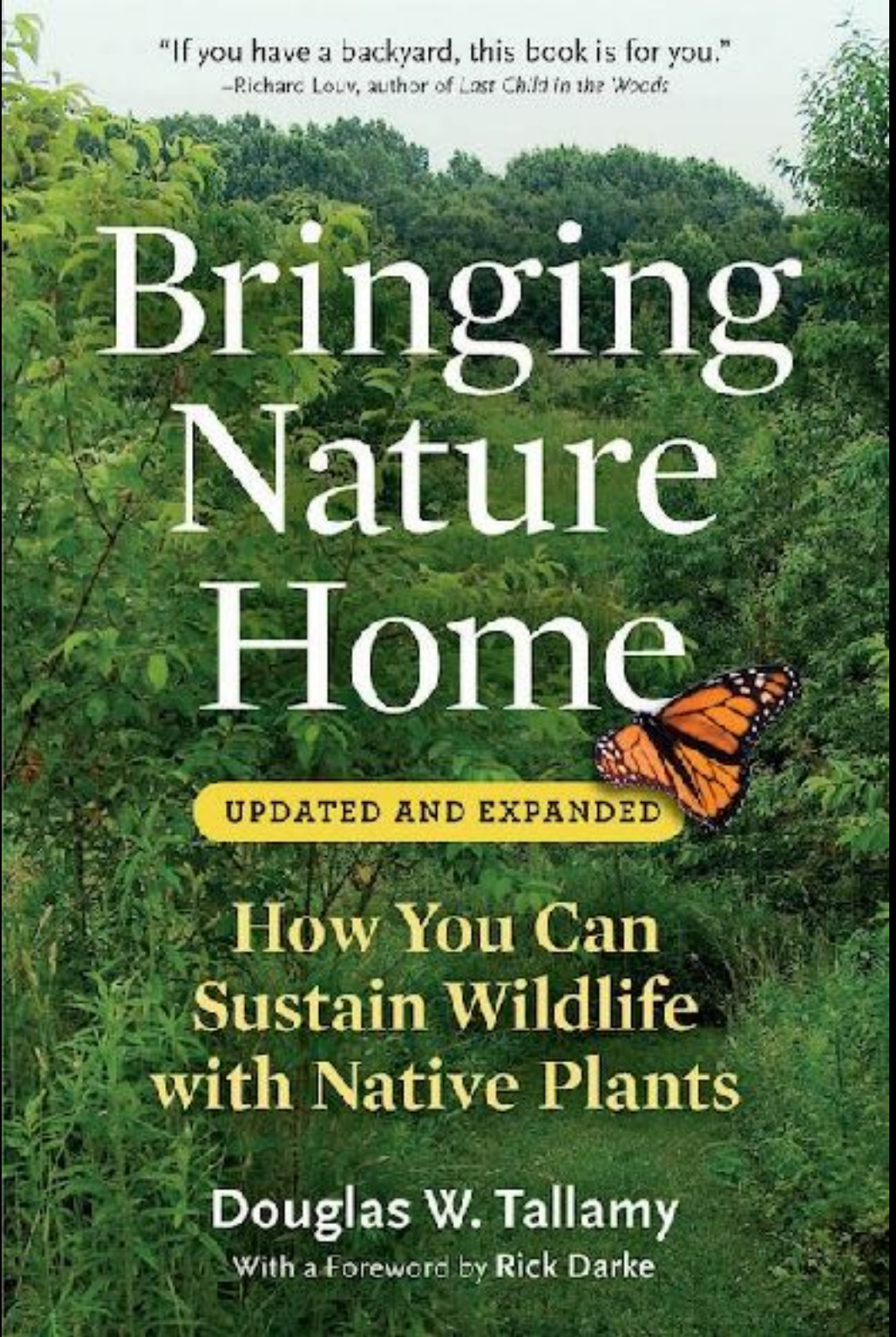


85.6% of the U.S. east of the Mississippi is privately owned.


We must raise the bar
for what we ask our landscapes to do.



**"It's simple: By gardening with native plants — no matter where you live or how small or large your space is —
you can help sustain wildlife."
— Doug Tallamy
Bringing Nature Home**

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Ten things can do you

1) Cut your lawn in half.
2) Remove invasive species from your property.
3) Use native plants.
4) Build a landscaped layered with plants.
5) Preserve your leaf litter.
6) Plant for specialist pollinators.
7) Plant natives that bloom sequentially from March to October.
8) Oppose mindless mosquito spraying.
9) Minimize insecticide use.
10) Work with your HOA and change from within.

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If each of us, gardening on our own plot, follows the principles discussed in this talk, we can enhance biodiversity and make a difference in the world!