

Bird-Friendly Habitat Gardening

*The Business Case for Entering a New and
Rapidly Growing Landscaping Market*

Presented by Pete Schubert
NC Invasive Plants Council
January 29, 2020



My Background

- Retired Project Engineer in Public sector for over 30 years
- Decades of Site Development and Site Management Experience
- Passions for Ecology, Botany, Geology, Native Plants, Sense of Place
- Volunteer with many several non-profits involved with Land Management and Ecosystem Health
- Plant expert volunteer with New Hope Audubon Society Bird-Friendly Certification Program
- Board member with the NC Invasive Plant Council

Goals of This Talk

1. Give you a quick overview of Bird-Friendly Habitat Gardening and why property owners are becoming inspired to Garden for Nature
2. Share with you how a local birding group, the New Hope Audubon Society, is promoting Bird-Friendly Habitats
3. Make you aware, and get you excited about, providing professional Habitat Gardening services for property owners and managers
4. Learn what tools, resources, or training you already HAVE or NEED to enter this newly emerging market

1. So what is Bird-Friendly Habitat Gardening?

- For many years, it was simply planting flowers for butterflies, and berries for the birds.
- Later folks realized that they also needed to provide the larval host plants for the butterflies, to support their full life cycles
- But then Doug Tallamy came along and changed everything with his seminal book ... connecting the critical role of our NATIVE PLANTS to our birds and ecosystems through the insects that feed the food webs

"If you have a backyard, this book is for you."

—Richard Louv, author of *Last Child in the Woods*

Bringing Nature Home



UPDATED AND EXPANDED

**How You Can
Sustain Wildlife
with Native Plants**

Douglas W. Tallamy

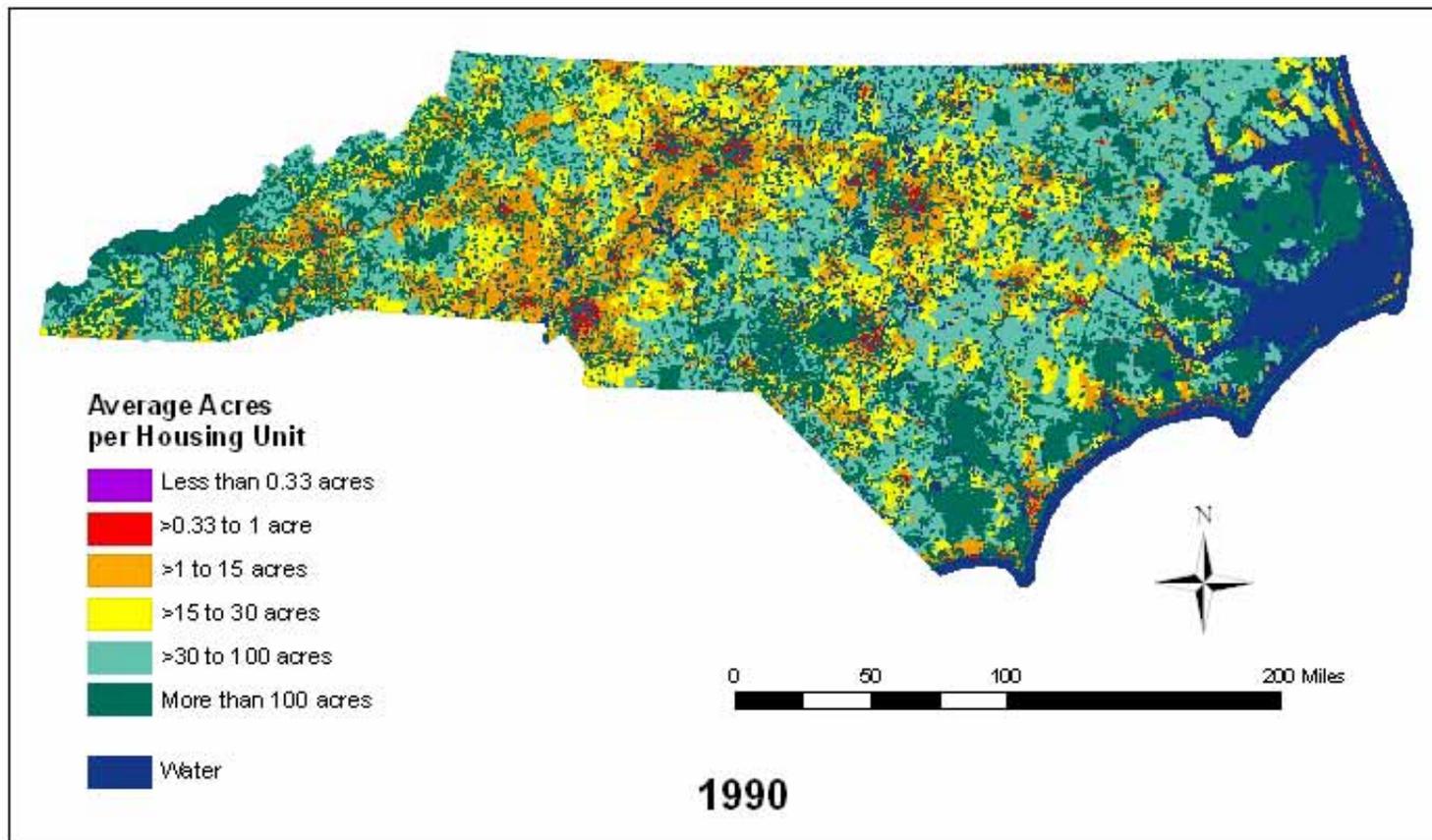
With a Foreword by Rick Darke

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.

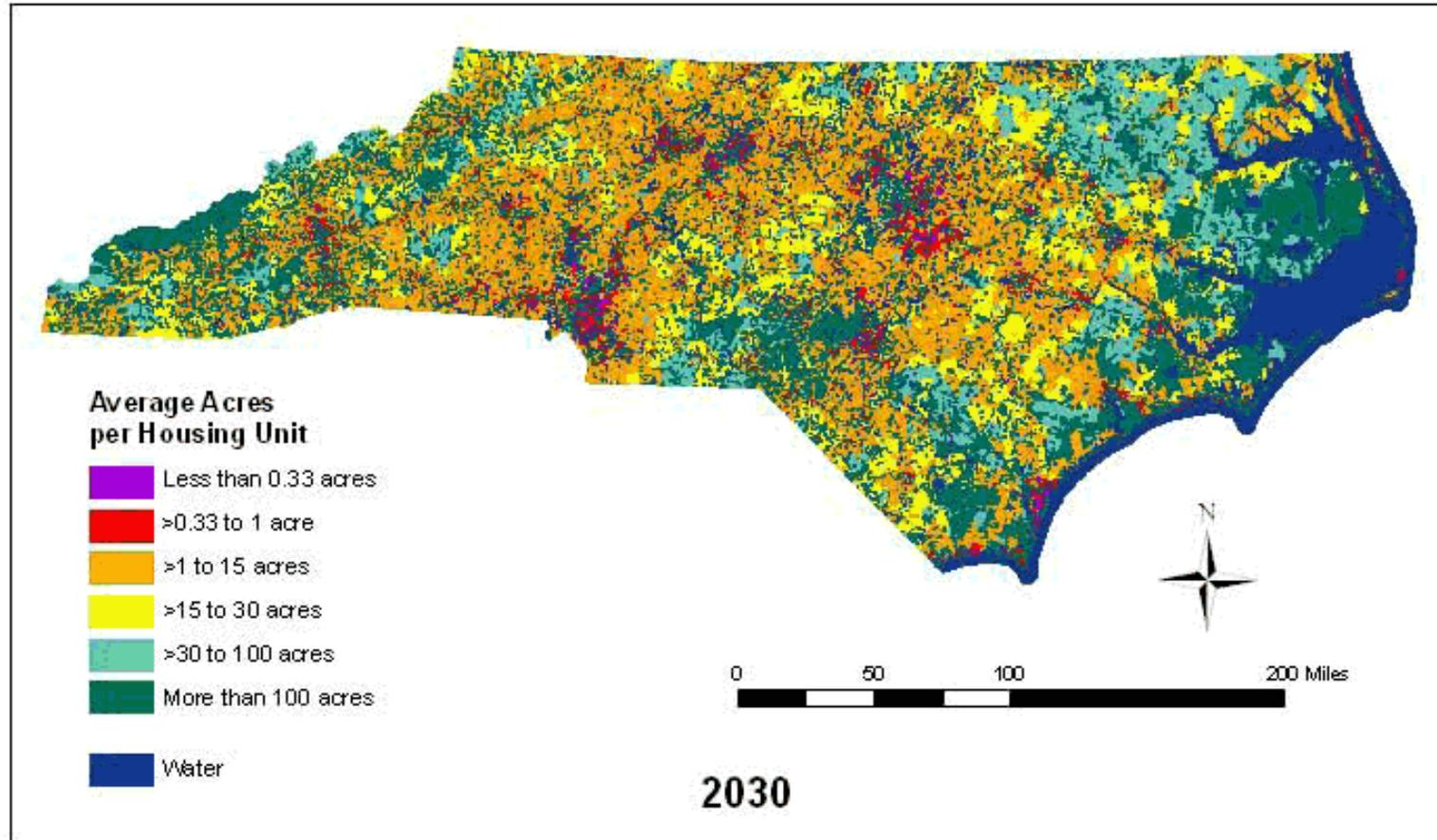
-- Doug Tallamy

Why is this so important?





Projected Housing Density



Unfortunately, 79% of plants in most yards are non-native which means little food for birds.



Mr. Throk, Flickr Creative Commons

~80% of plants non-native



The Bird-Friendly Yard



Vegetative Layers
Food
Water
Shelter
Nesting Sites





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

Baby birds need insects!



Prothonotary Warbler - Chuck Carmack

5,000 caterpillars for one chickadee brood



Carolina Chickadee - Will Stuart

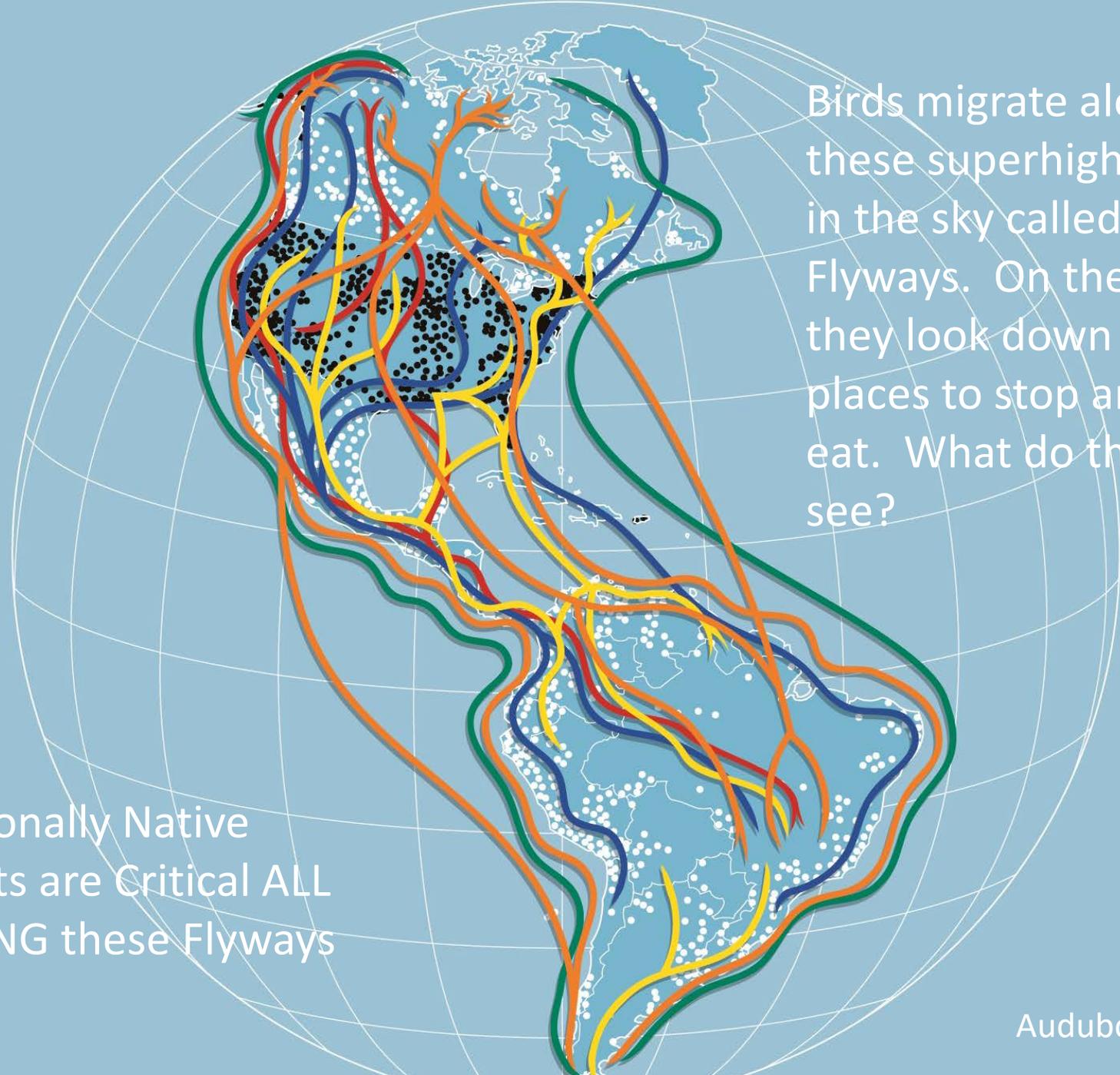


Prothonotary Warbler by Will Stuart

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

bringingnaturehome.net



Birds migrate along these superhighways in the sky called Flyways. On the way they look down for places to stop and eat. What do they see?

Regionally Native Plants are Critical ALL ALONG these Flyways

National Audubon Society

What's Wrong with Non-native Plants?

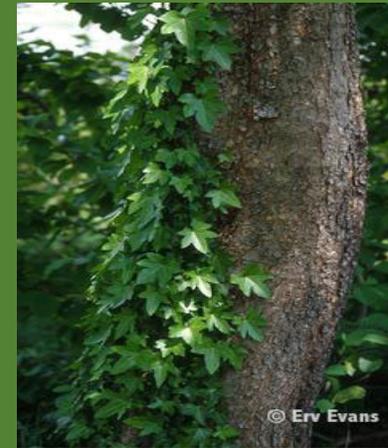
- Non-natives are not originally from our region, often not even our hemisphere
- They have not evolved with our fauna and flora, while natives have evolved over the course of hundreds of thousands of years have escaped cultivation and now overrun native vegetation
- Non-native plants create a food desert for our ecosystem
- AND, if they are also **INVASIVE**, they actively displace native plants, harming ecosystems and disrupting food webs



Japanese Stiltgrass
(*Microstegium vimineum*)



Autumn Olive
(*Elaeagnus umbellata*)



English Ivy
(*Hedera helix*)

Is our ecosystem failing?

“Insect apocalypse’ poses risk to all life on Earth, conservationists warn”

--The Guardian, 13 NOV 2019

“This past winter saw the highest honeybee colony losses on record”

--Washington Post, 5 JUL 2019

“Birds Are Vanishing From North America”

-- New York Times, 19 SEP 2019

“Three billion birds have been lost in North American since 1970”

-- National Geographic, 19 SEP 2019

“The vanishing Flights of the Monarch Butterfly”

-- The New Yorker, 20 FEB 2109

2. Who is the New Hope Audubon Society?

- NHAS is the national Audubon chapter for 3 counties in the Triangle area – Durham, Orange, and Chatham
- They developed a Bird-Friendly Habitat program to promote habitat improvement for the benefit of our birds, and the ecosystems upon which they depend
- The Program has many elements, focusing on education, supply, and demand.

New Hope Audubon Society

www.newhopeaudubon.org



NHAS B-F Habitat Certification Program Elements

- Improving Native Plant Availability
 - List of Nurseries and Garden Centers who sell native and meet other criteria
- Educating Nurseries and Garden Centers with brochures, signs & on-site programs
- Raising Public Awareness through public presentations, tabling, and talks to civic and private groups
- Educating HOAs and their boards
- Developing a Pilot Corporate B-F habitat program
- but the core: Our Habitat Certification Program for Homeowners

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 Stuart

NEW HOPE AUDUBON



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.





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)

The Certification Yard Visit

- Site visit by a team of 2 or more volunteers, including 1 plant expert and 1 recorder
- Identify most of the plants in the yard to Genus, noting what is native, non-native, and invasive. This is done with the homeowner and takes about an hour and a half
- Evaluate other habitat elements present (snags, brush piles, nest boxes, water features, minimizing monoculture turf, minimizing pesticide use, keeping cats indoors, etc.)
- Producing a written report of what we find, with recommendations for improvement
- All for a \$50 one-time fee (donation to NHAS), with unlimited follow-up visits as requested towards becoming certified

B-F Habitat Certification Stats

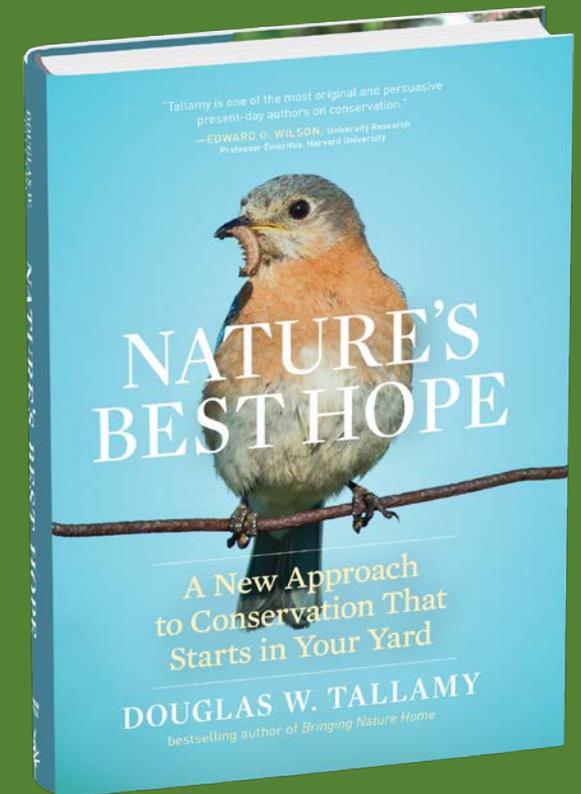
- 144 residential properties visited
- Total of 568 acres evaluated.
- Properties range from 0.1 ac plot in a townhome to 55 acre tract; most are under 1 acre suburban lots
- 86 properties recognized for certification – about 60%
- 58 properties don't meet certification criteria – about 40%
- Every property has challenges managing invasive, non-native plants – this is the ***single most time consuming and difficult task***. It involves Control, Eradication, and Maintenance.

3. Why is all this important?

- Bird-Friendly Gardening, and Habitat Gardening in general, is taking off in the Triangle. More than half of the homeowners in the yards I have visited need and want to pay someone to help them. They want to hire someone who knows our native plants, and knows our invasive plants, to help them improve their yards, whether it's a quarter acre or 20 acres
- We expect the number of certifications yard visits to double each year
- A large HOA in Chatham County wants to adopt our program and add B-F habitat requirements to their landscape maintenance contract

3. Why is all this important?

- NHAS is partnering with a 150 acre campus and their landscape maintenance contractor to develop a PILOT Corporate B-F Habitat Program. The nationwide property manager and the contractor want to replicate this approach across the Southeast Region.
- Doug Tallamy has a new book coming out Feb 1 – “Nature’s Best Hope”, which is focused specifically on what homeowners can do. We expect that will snowball interest and ACTION in homeowner habitat improvement



3. Why is all this important?

- There are VERY FEW landscape professionals who are qualified and ready to fill this need.
- **Homeowners & Property Managers need YOUR help! *More than half of homeowners would hire professionals to help them manage invasives if they could find qualified landscapers – this is the greatest unmet need***

4. How Do You Seize This Business Opportunity?

Skills You Will Need

- Know and recognize our native plants
- Know and recognize our invasive plants
- Know proven and effective mechanical and chemical invasive plant control techniques (pull, cut/paint, hack/squirt, foliar spray, defruiting, etc.)
- Know seasonal priorities and approaches to address the full spectrum of a existing site's vegetation
- Use IPM approaches and techniques
- Have the ability to engage and educate owners of varying levels of understanding

Knowledge You Will Need:

- The critical elements of a Habitat Garden – e.g., NHAS criteria
- Our pollinators and their larval host plants
- Our Keystone native species
- The significant differences between maintaining a Habitat Garden versus a conventional aesthetic landscape, from homeowner to corporate scale
- Emerging threats and controlling their spread

Contacts You Will Need

- Sources for nursery-propagated native plants
- Sources who produce plants free from neonics and other systemic pesticides
- Habitat Landscape Design using natives – in-house or your consultant
- Connections to the customer demand – marketing your talents and services

Resources Available – for NC

- The NC Invasive Plant Council, www.nc-ipc.org
 - Fact sheets for the major invasive plants that threaten our natural areas
 - Annual symposium to keep practitioners up to date on latest research, successes, and challenges
- NC Native Plant Society, www.ncwildflower.org
 - Online pictorial database of many native plants
 - Invasive Exotic Species [listed by threat level](#)
 - Regional [Chapters](#) which conduct meetings, give presentations, and lead outings to natural areas and public and private gardens
 - Join/contact your local chapter
- NC State University, [Going Native](#)
- NC Audubon, [Bird-Friendly Native Plants](#)
- NWF's [Native Plant Finder](#) by Zip Code

Resources Available – for the Triangle Area

- NC Botanical Garden at UNC Chapel Hill, ncbg.unc.edu
 - Habitat gardens
 - Plant sales of nursery propagated natives (in-house and private nurseries)
 - Educational classes, workshops, and certificate programs
- New Hope Audubon Society, newhopeaudbon.org
 - Bird-Friendly Habitat Certification Program
 - Recommended list of native plants for the Piedmont
 - Recommended sources of native plants (retail and wholesale) Retailers and Growers

Other Potential Resources?

- Educational Sessions at Green & Growin?
- A Certificate Program or series of courses at our local community colleges? (e.g., the Sustainable Ag program at CCCC)
- Hands-on field training in chemical or mechanical control techniques? Plant ID? Seasonal approaches? Propagule harvesting/removal?
- Fact sheets, pocket guides, and other field tools for supervisors, foremen, and/or technicians?
- Industry databases: About which growers and suppliers sell natives? About the use systemic pesticides?

Questions?