

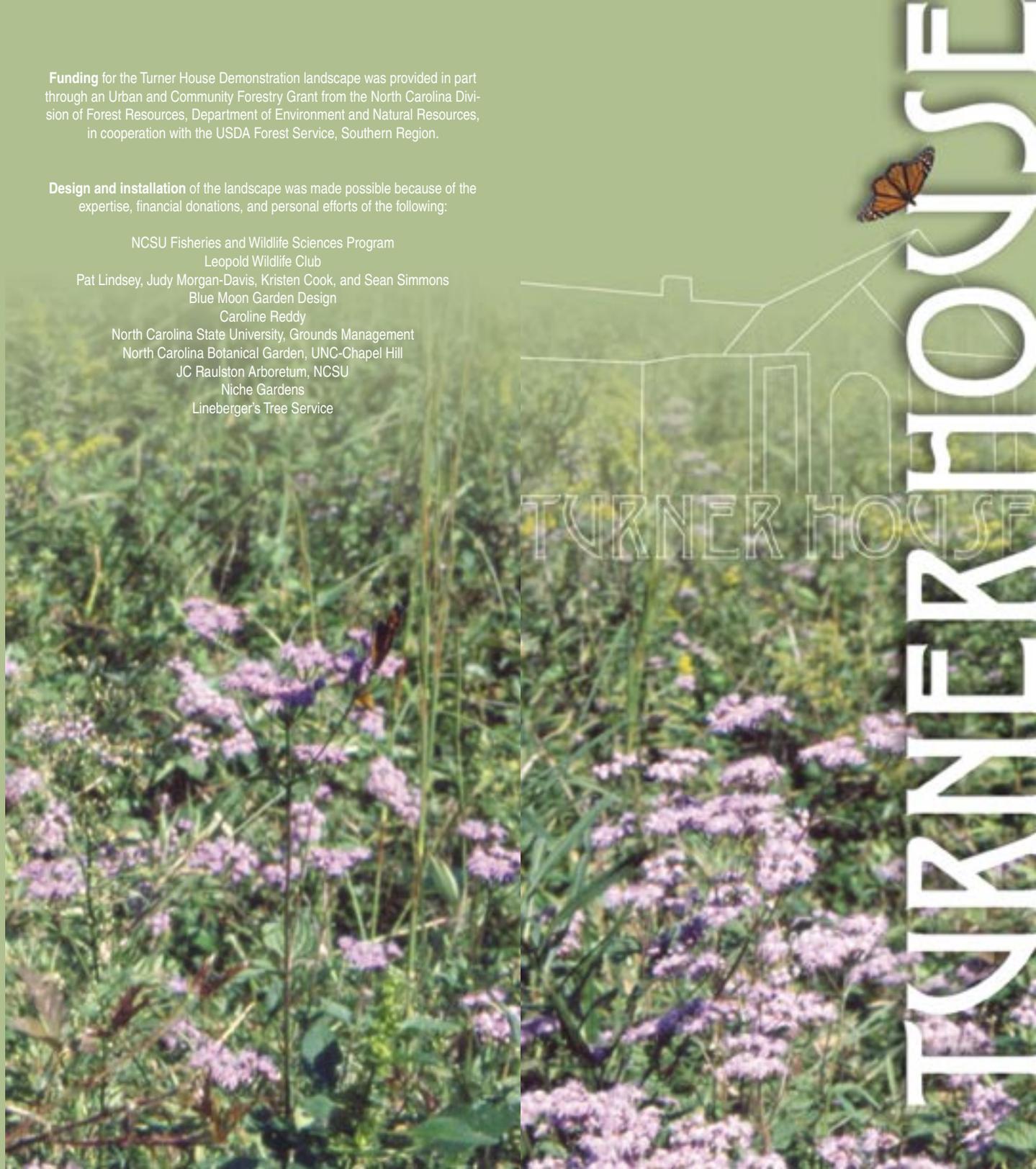


is home to the North Carolina State University Fisheries and Wildlife Sciences Program. The grounds around the building are designed to be a demonstration of how to create a wildlife friendly area by landscaping with native plants. Before these landscaping improvements were made, the grounds were relatively barren and contained mostly exotic plant species that had little wildlife value. With University faculty providing oversight, students in the Department of Horticultural Science designed the landscape to provide excellent wildlife habitat in an attractive setting. Students from the Leopold Wildlife Club at NC State helped remove the exotic plants, install North Carolina native plants, and create paths. You are invited to walk along the paths using this brochure, the plant identification tags, and your senses to learn more about landscaping for wildlife with native plants.

**Funding** for the Turner House Demonstration landscape was provided in part through an Urban and Community Forestry Grant from the North Carolina Division of Forest Resources, Department of Environment and Natural Resources, in cooperation with the USDA Forest Service, Southern Region.

**Design and installation** of the landscape was made possible because of the expertise, financial donations, and personal efforts of the following:

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## LANDSCAPING FOR WILDLIFE

### IMPORTANCE OF LANDSCAPING FOR WILDLIFE:

Today's growing human population drives human sprawl and the loss of wildlife habitat. Remnant wildlife habitats become increasingly isolated from other habitats, which has a detrimental effect on animal life. By following proper landscaping guidelines and using a diversity of native plants, backyards and other urban areas can provide moderate to excellent wildlife habitat.

## NATIVE PLANTS

### WHY NATIVE PLANTS?

Native plants generally are defined as those that occurred in North Carolina before settlement by Europeans. Exotic plants are those not native to an area. Exotic plant species that are able to survive and reproduce without the help of humans, especially those that grow vigorously where native plants otherwise would occur, are termed invasive. Invasive, exotic plants pose a serious risk to the native plants and animals of North Carolina. Competitors, diseases, and insects control a plant's growth and dispersal in its native range. Over thousands of years, natural checks and balances develop, which greatly reduce the chance that a single species will increase in number to completely dominate a plant community.



However, when an exotic plant is introduced to North Carolina, it escapes its natural controls and can become invasive. The characteristics that make many exotic plants attractive as ornamentals (colorful berries, pest resistance, tolerance of harsh conditions) also increase their potential for invasiveness and make them difficult to contain. Prolific growth by a single plant species can be harmful because forests with a limited number of plant species provide very poor habitat for wildlife.



You can help stop the exotic plant invasion by using and nurturing native plants around your home and on your property. Native plants generally grow well and require less care than exotic species when grown on the proper soils under the right environmental conditions. In addition,



North Carolina's native wildlife have become adapted to using native plants over thousands of years. Therefore, native plants meet the needs, including food and cover, of North Carolina's native wildlife without causing long-term damage to local plant communities.

## PLANT DIVERSITY

### WHY IS PLANT DIVERSITY IMPORTANT?

A diversity of native plants in an urban landscape provides:

- Seeds, nuts, and fruits for squirrels and other mammals.
- Seeds, fruits, and insects for birds.
- Nectar for hummingbirds and butterflies.
- Larval host plants for butterfly caterpillars.
- Alternative food and cover for wildlife in all seasons.



### DESIGNING A WILDLIFE-FRIENDLY LANDSCAPE

Plan viewing areas by locating wildflower beds and fruit-producing plants in sight of windows and paths, but avoid planting near reflective glass or windows to reduce accidental window strikes by feeding birds. Consider moisture and light requirements when selecting plants. Place moisture-loving plants in low-lying areas, and position shade-loving plants under large trees or on the shady side of your home. Mimic Mother Nature by creating gentle curves in your landscape. The beauty of a natural landscape will rival that of most conventional landscapes.

## WILDLIFE-FRIENDLY LANDSCAPE

## CLUSTER PLANTINGS

### WHY CLUSTER PLANTINGS?

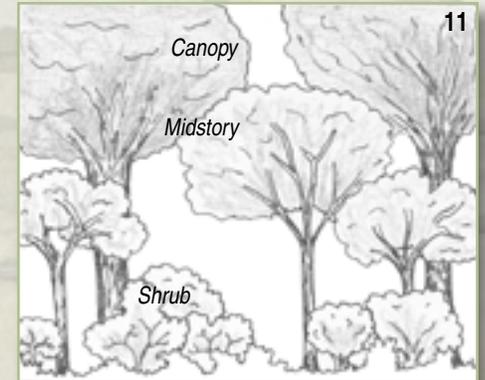
Clustering similar types of vegetation allows wildlife easy access to seasonally abundant food sources without excessive movement and exposure to predators. Clumping similar species and placing shorter herbs and shrubs in front of taller vegetation improves the appearance of your habitat.



## VERTICAL PLANT STRUCTURE

### IMPORTANCE OF VERTICAL PLANT STRUCTURE:

Planting low-growing herbs and shrubs under taller shrubs and trees helps to provide the layering important to wildlife. For example, some birds eat and nest on the ground, while other species prefer the shrub, midstory, and canopy layers of a landscape, so providing a variety of plants that grow to different heights increases your chance of attracting a variety of birds and other wildlife to your landscape.



## FRUIT-PRODUCING

### FRUIT-PRODUCING PLANTS:

- Beautyberry (*Callicarpa americana*)
- Dogwood (*Cornus florida*)
- Winterberry (*Ilex verticillata*)
- Serviceberry (*Amelanchier arborea*)
- Wax Myrtle (*Myrica cerifera*)



## SEED-PRODUCING

### SEED-PRODUCING PLANTS:



- Oaks (*Quercus* spp.)
- Purple Coneflower (*Echinacea purpurea*)
- Orange Coneflower (*Rudbeckia fulgida*)
- Swamp Sunflower (*Helianthus angustifolius*)
- Yellow-poplar (*Liriodendron tulipifera*)

## EVERGREEN COVER

### EVERGREEN COVER PLANTS:

- American Holly (*Ilex opaca*)
- Inkberry (*Ilex glabra*)
- Eastern Redcedar (*Juniperus virginiana*)
- Loblolly Pine (*Pinus taeda*)
- Catawba Rhododendron (*Rhododendron catawbiense*)



## BUTTERFLY NECTAR

### BUTTERFLY NECTAR PLANTS:

- Aromatic Aster (*Aster oblongifolius*)
- Sweet Pepperbush (*Clethra alnifolia*)
- Dwarf Azalea (*Rhododendron atlanticum*)
- Goldenrod (*Solidago* spp.)



- Hoary Mountainmint (*Pycnanthemum incanum*)
- Summer Phlox (*Phlox paniculata*)
- Ironweed (*Vernonia noveboracensis*)
- Joe-Pye-Weed (*Eupatorium fistulosum*)



## HUMMINGBIRD NECTAR

### HUMMINGBIRD NECTAR PLANTS:

- Red Buckeye (*Aesculus pavia*)
- Carolina Jessamine (*Gelsemium sempervirens*)
- Coral Honeysuckle (*Lonicera sempervirens*)
- Cardinal Flower (*Lobelia cardinalis*)
- Wild Columbine (*Aquilegia canadensis*)



## FEEDING BIRDS IN YOUR YARD

### TIPS FOR FEEDING BIRDS IN YOUR YARD:

- Bird feeders supplement the natural foods in your backyard and concentrate bird activity for easy viewing. Black oil sunflower, safflower, white millet, and thistle seeds are all preferred types of birdseed.
- All feeders should be placed within 10 feet of shrubby vegetation, especially evergreen plants. This allows smaller birds to quickly escape into nearby cover from predators like Cooper's hawks. Feeders placed too close to shrubbery are easily accessible to stalking cats, and feeders placed close to windows can lead to bird-window collisions.
- Feeders should be cleaned at least every 2 to 3 weeks to prevent disease transmission among birds.



## NEST BOX

### SELECTING AND ERECTING A NEST BOX:

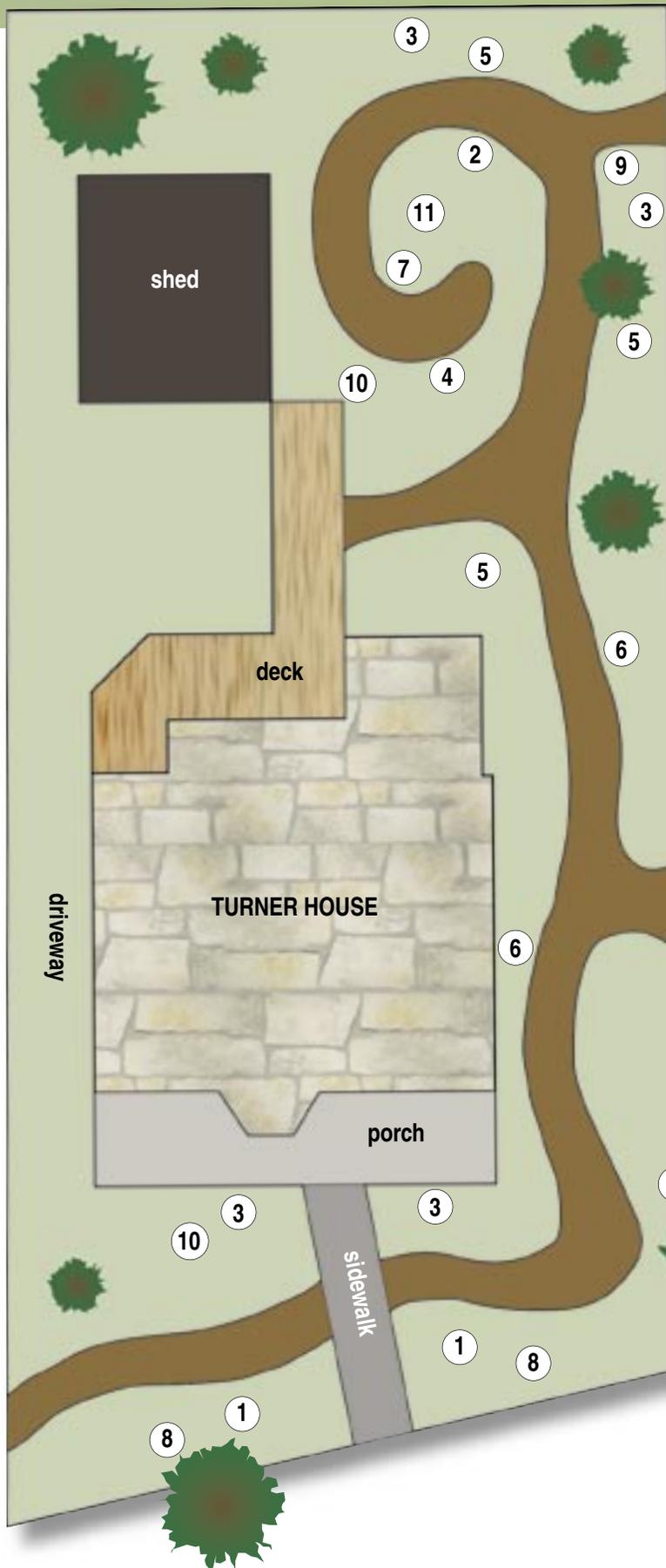
- Dead trees are important nesting sites for cavity-nesting birds like woodpeckers and bluebirds and should be protected when possible. Because dead trees often are considered unsightly or liability risks, nest boxes frequently are used as replacements for natural cavities. They provide nesting sites for a variety of bird species, including bluebirds, chickadees, great-crested flycatchers, screech owls, titmice, and wrens.
- A well-designed nest box is made of sturdy lumber (e.g. pine, redcedar, or cypress), has the dimensions appropriate for the target species, has a metal entrance hole guard to prevent expansion by woodpeckers or squirrels, and does not have a perch.
- The box should be placed in a location appropriate to the target bird species.
- A nest box placed on a post above a predator guard should increase the chance that adult birds will raise young in your landscape.
- Nest boxes can be cleaned out in February before the new nesting season begins.



## PHOTO CAPTIONS

- 1 The Turner House grounds were barren before the landscaping project was initiated.
- 2 This vacated urban lot is dominated by exotic plants like sericea, kudzu, mimosa, and Queen Anne's lace.
- 3 Red fruits of some exotic plants like autumn olive are readily eaten by birds, aiding in their dispersal.
- 4 An American goldfinch eats seeds as it perches atop an orange coneflower.
- 5 Flowering dogwood fruits are eaten by a variety of wildlife.
- 6 Northern cardinals are easily attracted to an urban landscape.
- 7 A common buckeye eats nectar from a purple coneflower.
- 8 A monarch rests on one of its milkweed host plants.
- 9 Coral honeysuckle and viburnum provide nectar for butterflies and hummingbirds during the spring.
- 10 A cluster of blooming ironweed offers a gulf fritillary easy access to nectar.
- 11 A landscape with vertical layers of vegetation provides excellent habitat for birds and other wildlife.
- 12 American beautyberry fruits often are eaten by birds.
- 13 Orange coneflower blooms in the summer and provides seed in the fall.
- 14 Catawba rhododendron provides winter cover for wildlife.
- 15 Dwarf azalea is one of the many deciduous azaleas native to the South.
- 16 Joe-pye-weed attracts numerous insects and small butterflies, such as hairstreaks.
- 17 Ruby-throated hummingbirds readily feed on the nectar of red buckeye.
- 18 A bird feeder can be used to supplement the habitat offered by native plants.
- 19 Great-crested flycatchers and other cavity-nesting birds will use nest boxes.
- 20 With the completion of the landscaping project, the Turner House grounds now are more attractive to people and wildlife.

# THE TURNER HOUSE



- Area 1** This area receives afternoon sun and contains summer-blooming perennial wildflowers like purple coneflower, summer phlox, and blazing star, which provide nectar for butterflies.
- Area 2** In this area, early-blooming plant species like wild columbine, dwarf azalea, and red buckeye provide nectar for hummingbirds when they first arrive in the spring.
- Area 3** Evergreen plants like inkberry, Catawba rhododendron, wax myrtle, and yaupon along the garden boundary offer important cover for birds and other wildlife during the winter and screening from adjacent areas year round.
- Area 4** Plants that bloom in late summer (ironweed and hoary mountainmint) and fall (swamp sunflower, blue aster, and aromatic aster) were grouped together in this area to provide butterflies and insects access to abundant nectar without excessive movement.
- Area 5** A mix of fruit-bearing shrubs like American beautyberry, spicebush, downy arrowwood, and winterberry along the garden path provides birds with a food source from late-summer through the winter.
- Area 6** The butterfly weed, joe-pye-weed, Stoke's aster, and goldenrod along this area of the garden love full sun and provide nectar for butterflies throughout the warmer months.
- Area 7** Multi-purpose plants like sweet pepperbush and Virginia willow offer cover for birds and nectar for butterflies and humming birds.
- Area 8** Grasses in the front and elsewhere in the garden provide seed for birds and retain some cover and aesthetic appeal during the winter months after perennials die back.
- Area 9** Spicebush and golden alexanders in this portion of the garden are the host plants for spicebush swallowtail and black swallowtail caterpillars, respectively.
- Area 10** Bird-feeding stations concentrate bird activity year round and make viewing from inside the Turner House easy.
- Area 11** The Turner House water garden provides a breeding habitat for frogs, toads, and salamanders; a drinking and bathing area for birds; and wetland plants with blooms attractive to hummingbirds and butterflies.

# MAP