

JONESBOROUGH'S BUTTERFLY GARDEN

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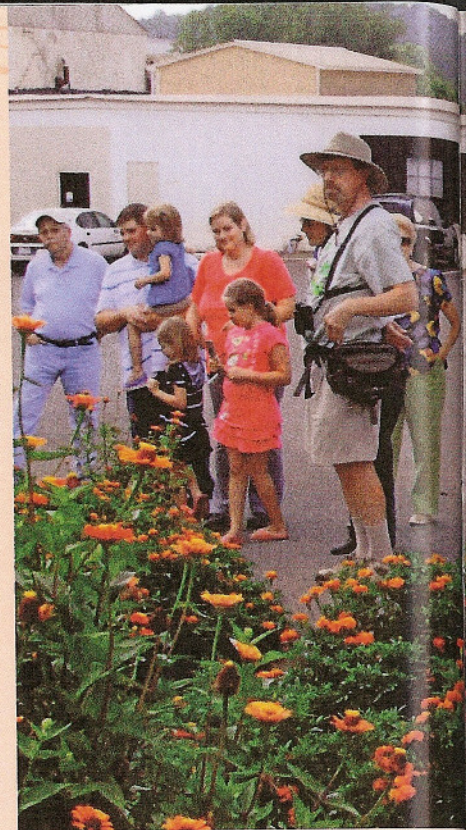
A BUTTERFLY GARDEN FOR JONESBOROUGH, TENNESSEE'S OLDEST TOWN

By Frances Lamberts and Beth Keiter

Photos by Beth Keiter, Frances Lamberts and Janice Rogers



A Spicebush Swallowtail laying eggs on a spicebush. Above, right: Don Holt guides a butterfly watch tour.



Butterflies flit and flutter through the pages of Emily Dickinson's poetry, "emerging from cocoon as lady from her door" or carting through roads in the sky "not made of man." They "waltz above a stream" during hot noon hours or "flirt all day" with their preferred flowers. They ride "off banks of noon" on soft winged oars, their "parasol" of such toughness as to allow them to "struggle hard with opposing cloud." Often they seem an "audience of idleness" as they glide \ leisurely by or sit "resting on (an invisible) beam."

During Emily Dickinson's lifetime and for years later, the American countryside was rich in the plants that support butterflies and other wildlife. As recently as the mid-1950s, the naturalist Edwin Way Teale could visit groves of "butterfly trees" along the southmost Pacific coastline, winter refuge of monarchs. The native grasslands of the prairies had not been entirely converted to ploughed fields, or to the "tamed pasture" that lacks many of our wildflowers. In mountain farmsteads farther east, patchworks of woodland glades, family orchards, meadows, and fallow fields retained nectar plants for butter-



tion, resulting in yet greater loss of local habitats and food for wildlife.

Six years ago, against the backdrop of its own suburban growth, Jonesborough welcomed a butterfly garden into one of the town's public areas. Due to the efforts of city employees and Frances Lamberts, the Pliny Fisk Environmental Services site, located at Highway 81 South and Britt Drive, became a place for trees and flowers, as well as the recycling, wastewater treatment and other city services housed at the site.

In the fall of 2005, a triangular plot of 2,100 square feet was cleared of weeds and the bare ground deeply mulched. The following March, thanks

to funds from the Tree and Townscape budget, volunteers were able to set out approximately 90 plants and shrubs there. Among these were three milkweed species, representatives of the mint and aster families, including Crimson Bee Balm and Wild Bergamot, the Tennessee and pale purple coneflowers, and two each of tickseed and phlox species. New Jersey Tea and lilac were planted; and, along the plot's west side, Spicebush and Mohawk Viburnum provided shelter from the wind. That fall saw the addition of several Eupatorium and Penstemon species; New England and Aromatic Aster; Orange Coneflower (Rudbeckia); and Yellowroot. A second, smaller bed

flies and other pollinators. Here pools of wildflowers survived, as Teale would note in his book *A Naturalist Buys an Old Farm*, often "massed more than a hundred together" — the Narrow-Leaf Mountain Mint so beloved by insects, Rough-fruited Cinquefoil, brilliant Cardinal Flower and Marsh Marigold, Bloodroot, little bluets and Rue Anemone. Such areas of wildflowers were the feeding grounds and promise of survival for the butterflies that delighted Dickinson in her time.

Since then, however, increasing population and accelerating changes in land development and settlement left these patchworks of natural landscape greatly diminished. Suburban development allowed more Americans to enjoy the charm of living in rural settings while being close to work. Yet, as President Lyndon Johnson pointed out, at the White House Conference on Natural Beauty in 1965, when cities "reach out into the countryside [they are] destroying streams and trees and meadows as they go." In the disturbed areas, non-native plants easily establish themselves. Most cause no great harm; but others, such as Japanese Honeysuckle and Knotweed, smother native vegeta-



A Gulf Fritillary and its caterpillar on a passion vine, above and below.





Butterfly Garden at Pliny Fisk Site and Monarch Waystation



Pliny Fisk Environmental Services Site
Hwy 81 South and Britt Drive
Jonesborough, TN 37659

The Jonesborough butterfly garden brochure cover. Below, center: The garden has been designated a Monarch Waystation by Monarch Watch, University of Kansas Entomology Program, Lawrence, Kan., www.monarchwatch.org.

gardening groups and organizations, including the members of our local Southern Appalachian Plant Society. In surveying plant eating insects in suburban gardens and lawns in Pennsylvania, Dr. Tallamy found butterflies and other insects greatly prefer natives to introduced plants. For butterfly larvae, particularly, the data reveal that plants that have been introduced to an area provide a 'starvation diet, supporting 35 times less caterpillar mass than do native plants.

Over the millions of years during which plants and insects have shared a common evolutionary history, many insects have come to rely on only a few plants, the monarch's dependence on milkweeds and the Gulf Fritillary's on

passion vine and Sassafras being well known examples. Introduced plants (like the Bradford Pear and Autumn Olive) may lack traits — specific blooming time, flower shape, chemical repellants or attractants — to which our native insects are adapted. An example described by Dr. Tallamy is Clematis alba. It has been present for more than a century in this country but supports only one North American insect species, whereas, in its homeland, it is host for 40 different insects. He cites the butterfly bush as another example: although providing nectar for adult butterflies, "not one species of butterfly in North America can use buddleias as larval host plants."

The problem of relying on introduced plants in suburban landscapes goes beyond the lack of food for insects. Many animals, especially birds during mating and chick raising, "depend partially or entirely on insect protein for food," Dr. Tallamy notes. Indeed, the loss of native plants, through habitat destruction by man and non-native competitors may be a little-noticed but significant factor in songbirds' declining numbers.

Fortunately, there is hope amid the discouragement we face, as members of this food chain, gardeners of the earth and caretakers of the planet. It is not too late to save most of our plants and animals, and bringing back native plants to our yards is relatively easy to do. We can re-establish habitat for butterflies and other wildlife one neighborhood garden



Spring weeding is underway at the butterfly garden.

at a time. Communities can do the same, one piece of public land at a time.

In Jonesborough's butterfly garden, the endangered coneflower flourishes. Visits by butterflies, birds, other wild creatures, and human sightseers have increased year by year. Indeed, for some hometown citizens, stopping by the garden for butterfly watching after church has become a regular part of Sunday enjoyment during the summer.

Not all plants sustain our native wildlife. That butterflies prefer certain flowers is a poetic observation confirmed by current conservation-biology research. To assure for ourselves and our descendants the opportunity to experience nature as did Emily Dickinson and Edwin Teale, and to continue to receive the butterflies' gifts of pollination, beauty, and wonder, we must do more, in private gardens and public spaces, to preserve and promote the plants they need and "desire."



(Dr. Beth Keiter is a retired physician and active gardener; Dr. Frances Lamberts is a retired psychologist who writes a weekly column on environmental issues in the weekly newspaper *Herald and Tribune*.)

Tennessee Coneflower grows in the main garden bed at the Butterfly Garden at the Pliny Fisk Environmental Services site in Jonesborough.





"I am prepared to expect wonders" of a seed, - Henry D. Thoreau. Shown are Butterflyweed, top; a caterpillar, center; and an adult Monarch Butterfly, bottom.



was established the following year with dwarf Fothergilla and Sweet Spire amidst patches of Christmas Fern, toothwort, Black Cohosh and Black-eyed Susan.

In 2008, public opening of the butterfly garden and its dedication as a Monarch Waystation was accompanied by the addition of New York Ironweed; Carolina bush pea and Lobelia in the main bed; and purple Passionflower in the bank facing it. A brochure describing the garden and plantings was made available at an information kiosk.

In 2009, the Mountain Empire Butterfly Club adopted the garden as one of its sites for field outings and guided, public butterfly-watching tours. Expansion of the garden that year, along the site-entrance driveway bed bordered by flowering dogwood trees featured rows of Tennessee Coneflower; Spanish Lavender and Cliff Stonecrop. Annual flowers of Salvia, zinnia, nasturtium and marigold gave additional nectar and color.

Adjacent to the garden, plantings of trees and shrubs provided further food sources and shelter for larval and adult butterflies. Many of these—oak, Black Cherry, Buckthorn, Sassafras, Pawpaw, and others, common or rare—are important host plants. So, here, the Eastern Tiger Swallowtail can seek nectar on Butterflyweed or bee balm while its caterpillar offspring can feed on the leaves of White Ash or Common Chokecherry.

A dozen community volunteers, some with Master Gardener experience were the "labor force" during those years, continuing to plant and maintain the plots. Fortunately, in early 2010 a team of dedicated gardeners, committed to the garden's long-term care joined the workforce. In addition to their weekly efforts, they added an expanded focus for the garden's future. The emphasis on native plantings and the desire to provide inspiration for their use in individual and public gardens resulted in the "banishment" of remaining non-native (but non-invasive) plants to one of the garden's secondary beds, or to other areas on the site.

It also resulted in a design change that features an interior "meadow" with labeled plant groupings along the paths and edges of the garden. Heartened by how well the endangered Tennessee Coneflower was thriving in our limestone-rich soil, and by prior successes with propagation, we began to consider means of supporting the garden and providing relatively unavailable plants, or rare or endangered ones, to individuals and public areas.

Our butterfly garden's focus on the need for native plantings is supported by the research findings of Douglas W. Tallamy, author of *Bringing Nature Home: How You Can Sustain Wildlife With Native Plants*, published by Timber Press of Portland, Ore., in 2007. In addition to his research and writing, he has been inspiring others in talks to