

A 20 million-acre national park proposed at Cary Institute

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MILLBROOK — “If we replant half of the area now devoted to suburban lawns with native plants, we could create a 20 million-acre national park,” according to Douglas Tallamy, entomologist, speaking at the Cary Institute on Friday evening, July 30. Tallamy’s lecture on the critical role native plants play in our food web and what gardeners can do to promote biodiversity was entertaining, informative and provocative.

Tallamy began his talk not with the national park, but with a story from his own youth in a typical American suburb, ironically named Oak Park. For weeks Tallamy had watched tadpoles develop and mature into small frogs in the pool located in an empty lot when an excavator leveled the ground and ended their life. That’s when Tallamy decided to become a scientist.

The lecture’s theme was that new species of plants, brought from other continents or even other regions of the United States, destroy the natural food web and lessen biodiversity. These alien species, many of them brought to the United States more than 100 years ago, are inedible to the local insects that evolved with the plants that surround them naturally. Consequently there are far fewer insects for birds and other animals to eat. Insects are especially important to birds as they raise their fledglings and provide the only available source of protein, calcium and moisture that is critical to their development. In fact, insects have twice as much protein as beef. Insects are also a food source for animals like black bears and foxes.

Tallamy said that many people don’t see the need for nature, that there’s lots of it someplace else, but in fact, he emphasized, biodiversity losses indicate that our ecosystems are not sustainable.

“Plants and animals are the rivets holding the ecosystems together,” according to Tallamy.

Ecosystems clean our water, build our topsoil, prevent floods, moderate weather, pollinate crops and sequester CO₂. Human life and well-being is supported by plant and animal diversity. Plants provide what scientists call “carrying capacity” for animals, feeding

them through photosynthesis. Urban and even suburban centers have very little carrying capacity and are growing rapidly.

In the United States there are 4 million miles of paved roads, five times the size of the entire state of New Jersey. Roughly 62,500 square miles of lawns are dedicated to unproductive, nonnative grasses — eight times the entire state of New Jersey. Forests, which pull carbon out of the air, are be-



ing destroyed at the rate of 50,000 acres a day. Only 5 percent of the United States can be considered pristine and most of that land is mountains or deserts.

Tallamy’s argument is that we must share space with other living things in order to preserve ourselves. He cited the breeding bird survey, which showed an extinction crisis. One-third of America’s bird species are endangered and others, like the wood thrush, are suffering dangerous declines. Ongoing studies show that even large, protected preserves and parks are not sufficient to protect biodiversity. But Tallamy believes that by raising the carrying capacity of our suburbs the health of the ecosystems can be revived.

Alien plants have invaded the landscape and the worst non-native species are those that are invasive. Purple loosestrife clogs our streams, Oriental bittersweet vines smother native plants, and bushy autumn olive, inedible to native insects, shades out native competitors and quickly becomes a nonproductive monoculture.

“A field rich in goldenrod, Joe-pye weed and black-eyed Susans supplies copious amounts of insect biomass for birds to rear their young. After it has been invaded by autumn olive, that same field is nearly sterile,” said Tallamy, who emphasized that insects are fussy eaters. Each insect species has evolved to eat

specific plants. Ninety percent of insects can eat plants in only three or fewer families. For example, monarch butterflies can eat only milkweed.

Tallamy has researched the spread of alien plants in his home state of Delaware, where he estimates that 80 percent of the plants are alien. Landscape contractors and horticulturists focus on how yards look, not what they do. As a consequence, denuded lawns scattered with ornamental foreign plants dot the country. Tallamy is a champion for “guerilla conservation,” replacing lawns and alien plants with native grasses, which don’t require mowing, and productive native plant species.

But not all native species are equal in their carrying capacity. A white oak tree will host 534 species of wildlife and a black cherry 456, while the majestic tulip tree hosts only 21 species and the native red bud only 17. Colorado blue spruce, which is native to the Rockies, supports no New England insects.

Superb photos of moths, caterpillars and bugs taken by Tallamy, many from his bathroom window in a Delaware suburb, reinforced his argument that any gardener can create a distinctive, sustainable native habitat in their backyard. Working with neighbors, biological corridors and animal sanctuaries can be created. Instead of raking-leaves in the fall, they can be left on the ground in a native landscape to provide a home for the ovenbird and food for snails that birds eat.

Tallamy advocates a direct “grassroots approach” that requires no government intervention, just the commitment and knowledge to return our landscape to its natural state. With the statement that “Gardening is a way of showing that you believe in tomorrow,” Tallamy ended his lecture and entertained questions from the audience.

After the lecture there was a line of people to buying the book, “Bringing Nature Home,” and asking the author, sporting a butterfly tie, to sign their copy. One couple said that they were surprised to learn how many native plants they already had in their yard, adding, “they are the ones that survive,” as a tip for identification.

For more information and details on native plants, go to bringingnaturehome.net.