

Bonding With the Wild World

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Functional Ecosystems on Private Property

"Nature's Best Hope" is about a cure for the pox the country has instigated on the environment which has seen 95% of the country logged, tilled, drained, grazed, paved or otherwise developed. The Earth has limited resources," says professor of entomology and wildlife ecology, "and the more we take for our own uses, the less there is for other species." The problem, of course, is that it's the species that comprise nature that keep us alive. I mean, we've lost 3 billion birds in the last 50 years – that is a third of our American bird population." The decline of global insects is equally severe. More than 40% of insect species are declining, and a third are endangered. "Insects are the little things that run the world. If we lose them, we're gone, period."

But back to the cure. Sure, the country has parks and preserves, but they're too small and isolated to sustain the species that run our ecosystems.

Habitat fragmentation is a huge problem. The solution, says Tallamy, is to set up functional ecosystems on private property and everywhere there're people. "Of course, all the other things need ecosystem services, too. There is no place on the planet where it's safe to have failed ecosystems. That's why we can't just focus on parks and preserves."

Tallamy names this massive restorative cure the Homegrown National Park. It will be the biggest park in the country, with an estimated 20 million acres of conservation corridors. Most vertebrates don't eat plants directly, he explains, but they eat something that does, typically insects. Chickadees in your yard need 6 to 9 thousand caterpillars to produce one clutch. To support the caterpillars, you need native plants, which are the foundation of local food webs, giving butterflies, birds and other wildlife what they need to survive.

To help people find native plants, Tallamy's assistant, Kimberley Shropshire, created the **Native Plants Finder**, at **https://nwf.org/nativeplantfinder**, with help from the U.S. Forest Service. Some plants native to the Northwest are sunflowers, golden rod, lupine, Indian paintbrush and yarrow. Native trees include a wide variety of fruit trees (such as cherry, beach plum and apple), as well as willow, birch, aspen and cottonwood among others.

Shropshire made a valuable discovery over decades of working with Tallamy. Just a few plant genera, or class of species, provide sustenance for most butterflies and moths critical to food webs. Some genera, such as oak, cherry and willow, host hundreds of caterpillar species while others are home to far less. Tallamy calls these hyper productive plants "keystones" because they have a disproportionately large effect on the abundance and diversity of other species in an ecosystem – like the wildlife he is trying to sustain. Without a minimal number of keystone plants, according to Tallamy, the food web "all but falls apart."

When the Endangered Species Act was written in 1973 to save individual species, says Tallamy, we weren't thinking of nature as a unit made up of interactive parts. "Nature is like a watch. You can't take one part out and expect the watch to work well, because all those parts interact with each other."

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What is happening now is considered by experts in the field to be the world's sixth mass extinction. More than 500 species are at risk and are likely to be lost in the next 20 years. It's why Tallamy feels an urgency to recruit more people willing to stem the tide in their own yards and communities. And it's one of the reasons he came up with the idea of Homegrown National Park.

"Everyone requires healthy ecosystems. It's not a political thing. Everybody needs it and the quality of your life depends on the quality of local ecosystems.

If you own a piece of earth – we call it private property – you have the obligation of being a good steward for that place. If you don't want to do that, sell it to someone who does, because that is part of the obligation of living on planet Earth.

On the Homegrown National Park website, an image of a bumblebee sits atop Tallamy's message: "In the past, we have asked one thing of our gardens; That they be pretty. Now, they must support life, sequester carbon, feed pollinators and manage water."

Tallamy doesn't believe this goal is too much to ask because we don't have any other choice. "More and more people realize we have a serious issue here. It is a global crisis with a grass roots solution," says Tallamy. "We don't have to depend on gridlock government or any president. We can do this ourselves."

Moonshadow Ventures uses Tallamy's concepts in bringing a Homegrown National Park into existence using basic, simple, carbon-friendly land use procedures and techniques.

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