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**BRINGING NATURE HOME:
How You Can Sustain Wildlife with Native Plants
A Book Report by Susan Corey-McAlpine
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When I see a Tiger Swallowtail (*Papilio glaucus*) on my butterfly bush (*Buddleja* species), I congratulate myself for having created a butterfly and bird environment. But congratulations are undeserved. I have planted an “alien” plant; the butterfly bush provides nectar for adult butterflies but is non-native and not a larval host for any North American butterfly. Join me for an examination of the importance of planting natives chosen to sustain all phases of an insect species’ life. Our guide is Douglas W. Tallamy, author of **BRINGING NATURE HOME**, a heavily researched and valuable resource. Tallamy is Chair of University of Delaware’s Entomology and Wildlife Ecology and has a three-decade expertise in insect taxonomy and behavioral ecology.

Traditional theory suggests that ecosystem health is dependent on the fixed interaction of specific species. The 1930’s loss of Yellowstone wolves decreased predatory pressure on elk, which increased the graze of willow, aspen and cottonwood, which, in turn, decreased beaver populations, dependent upon a winter willow supply. When the wolves returned, disrupting the elk’s concentrated graze, the healthier trees sustained a then-renewed beaver population.

Tallamy prefers the “Jenga hypothesis” to the Yellowstone theory. This more complex hypothesis (named for the wooden tower puzzle) proposes that, while each block supports a portion of the tower, the importance of each block shifts depending upon which of the other blocks is removed. “Thus the role each block plays in the stability of the tower is relative and constantly changing,” Tallamy asserts. Using this as an analogy for insect/plant/bird interaction,

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he shows that different species can play keystone roles at varying times. Therefore, “all species have the potential to sink or save the ecosystem.”

Tallamy’s definition of an “alien” plant is one that cannot host any complete insect life cycle, since the “alien” did not co-evolve with a specific insect over time. The inability to host an insect species is a major selling point of a “pest-free” ornamental. The native garden, which produces approximately 35 times the caterpillar biomass compared to “alien” gardens, is preferable. There are a few “generalist” insects, like aphids that feed on several different plant species, but even these prefer natives to “aliens”. And a “generalist” insect eating through those several “alien” species will cause more damage than a “specialist”.

The decrease of birds in “alien” gardens, Tallamy believes, is because fewer insects in the garden means less bird food which means fewer birds nesting and raising the next generation. Also, native bees show a preference for native plants compared to “alien” plants, even if both plants are within the same species. Why are honeybees accepting of “alien” plants? Honeybees are “alien” themselves, originating in Europe, so they are able to digest “alien” nectar. But a native garden welcomes native bees, with long (bumblebee) or short (sweat bee) tongues which reach into nectar stashes made just for each species.

The book’s exploration of how specific insects have co-evolved with specific native plant species to best complete life phases was fascinating. The pipevine swallowtail (*Battus philenor*) devours leaves from, and lays eggs on, only the Dutchman’s Pipe (*Aristolochia californica*). Upon hatching, its caterpillar retains the vine’s bitter taste, causing hungry birds to reject it.

Tallamy’s research subjects (Eastern species of insects, birds, and trees) tilt heavily toward those found in his backyard, but in this updated edition, he generously offers many reference charts detailing Northwestern plants, insects, and birds. One chart ranks how many species of butterflies are supported by each tree species. An example is the oaks (*Quercus* genus), supporting 534 species. Additionally, Tallamy charts host plants linked with nurtured insects, so your targeted planting choices are easy.

In El Dorado County, we help our bird and insect species thrive by planting nurturing natives like these: blue spruce (*Picea pungens*), red maple (*Acer rubrum*), black walnut (*Juglans nigra*), *Catalpa bignonioides*, oak species like the California black (*Quercus kelloggii*) or Pin (*Q. palustris*), or even a small patch of violets (*Viola* species). Even the ornamental Crabapple (though it is not the fruiting native that Tallamy prefers) is useable for “generalist” birds and insects, one of the few non-native trees that is. How to begin? Tallamy suggests clearing an edge-space and filling it in with natives to attract the insects which feed the type of bird you want to welcome. Or when an “alien” dies, replace it with a native.

Douglas W. Tallamy’s *BRINGING NATURE HOME* (Timber Press, 2019) is a rich, detailed exploration of home garden insect ecology.

In response to Coronavirus (COVID-19) and recent California Department of Public Health and El Dorado County Health & Human Services guidelines, UCCE Central Sierra will cancel all Master Gardener public events and classes in El Dorado and Amador counties. Master Gardener

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public events and classes. This cancellation remains in effect through May 10th, and will be updated as public health guidelines change.

We realize our public classes are valued by county residents and we especially appreciate your continued support and understanding during this public health challenge. We will attempt to offer our cancelled classes and events at a future time if feasible; please refer to our website <http://ucanr.edu/edmg> which will be updated with the latest changes as they occur.

Stay safe and follow recommended health and sanitation practices in the coming weeks.

For more information on the UCCE Master Gardeners of El Dorado County, see our website at <http://mgeldorado.ucanr.edu>. We are still available to answer home gardening questions via email mgeldorado@ucanr.edu or call (530) 621-5512, or contact us using the Ask a Master Gardener option on our website. Looking for garden inspiration, while our garden is closed due to COVID-19, our website has pictures, plants lists and much more. http://mgeldorado.ucanr.edu/Demonstration_Garden. To sign up for notices and newsletters, see http://ucanr.edu/master_gardener_e-news. Master Gardeners are also on Facebook and Instagram; we hope you enjoy our postings and will share them with your friends.