



Landscaping for
Birds
and Wildlife

Presented by Betsy Dudash

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Why landscape for wildlife?

Parklands make up only 3-4% of the continental United States.

Yards make up about 17% of total greenspace; in cities that total jumps to about 50%.

Across the country, large swaths of nature are being turned into housing and commercial developments.

The Insect Apocalypse is underway.

Over the past 50 years, North America has lost more than a quarter of its entire bird population, or around 3 billion birds.

Biodiversity of plants and animals is being lost, but we can help.

What should
a biodiverse
landscape
include?

Besides insects and birds, a healthy ecosystem may also include reptiles, amphibians, mammals, and molluscs.

All species require food, water, cover—to rest, raise young, and store food—and space. Without these, wildlife can't survive.

To attract wildlife to your yard, add or augment the factors—food, water, etc.--that are limiting who that can make their home there.

A viable landscape should include ecologically productive plants instead of ecologically destructive plants.



Plant diversity determines animal diversity

- Think about your own yard and the yards in your neighborhood. Do you think that the plants you see are, on the whole, ecologically productive?
- Do the lawns, shrubs, flowers, and trees found in many yards provide food and shelter for insects, birds, and other animals?
- Do you see caterpillars munching away on leaves, butterflies flitting about, native bees busily buzzing their way through the day, and a variety of birds raising their young in the shrubs and trees?



Your yard is ecologically significant

- Yes, your yard--whether it's a tiny urban space like mine, a large suburban plot, or surrounded by shrub-steppe or forest—has the potential to support a diverse, healthy ecosystem.
- In a healthy ecosystem, animals control pests, pollinate up to 90% of plants, and disperse plant seeds.
- The key is to start with ecologically productive plants, which are generally native plants.
- Why are native plants more ecologically productive than non-native plants? Because they have co-evolved over thousands of years with native fauna, including seasonal migrators.



Caterpillars are
the key

- Caterpillars are [the larval forms of butterflies and moths](#).
- They are essential to the food web. They eat plants and then are often eaten by other animals, including birds.
- Because caterpillars are large, soft, nutritious, and high in essential carotenoids, research has shown that [they dominate the nestling diets in 16 of 20 bird families](#): woodpeckers, crows, cuckoos, swallows, sparrows, flycatchers, chickadees, thrushes, cardinals, shrikes, bushtits, vireos, and hummingbirds.
- [For birds to successfully breed, they need thousands of caterpillars just to feed one clutch!](#)

About that co-evolutionary history...

- Most plant-eating insects can only develop and reproduce on plants that share an evolutionary history.
- Caterpillars have very specific host-plant needs. Turfgrass lawns and non-native ornamental flowers, shrubs, and trees cannot feed the caterpillars.
- By adding some of the plants they need to the landscape, we can feed caterpillars and birds and help butterfly and moth populations to recover and eventually thrive.
- Caterpillars need to be allowed to complete their life cycle, so the right kind of maintenance is critical.



Ecologically productive plants

Douglas Tallamy uses the term “keystone plants” for the native species that are most important for supporting caterpillars throughout their life cycle.

According to Dr. Tallamy, only about 5% of native species make up about 75% of the caterpillar food that ultimately feeds many other species. So, our focus in rebuilding wildlife habitats should be the most ecologically productive native plants.

One study (Bellamy) showed that using non-native species reduced insect use by 68%.

The case for natives

- Ph.D. research by Desiree Narango in Washington, D.C., compared chickadees in native landscapes and in yards dominated by introduced plants.
- The non-native landscapes produced 75% fewer caterpillars and were 60% less likely to have breeding pairs. The nests contained fewer eggs, clutches were less likely to survive, there were fewer fledglings, and they were slower to mature.
- BUT: her results also showed that, if at least 70% of the landscape was native (keystone) species, the breeding bird population would be sustainable—i.e., the population wouldn't decrease.



Some inspiration

Dr. Douglas Tallamy presents real-world success stories of people using native plants to create a wildlife habitat.

The first is a 0.1 acre yard in Chicago, adjacent to one of the runways at O'Hare Airport and ½ block from the Kennedy Expressway. The owner added 60 native plant species and a water feature to her yard, and 116 species of birds have visited.

The owner of a 0.6 acre yard in suburban Kirkwood, MO, replaced invasive plant species with natives and installed a small water feature with a bubbler. Visits by 149 bird species, including 35 warbler species, resulted!



Creating your wildlife-friendly habitat in a few simple, not-at-all backbreaking steps (kidding)

- Make your lawn smaller or get rid of it.
- Deal with invasive species. (Your county weed board can help.)
- Plant native keystone plants to provide habitat and food for caterpillars and other species.
- Use a sensor for bright security lights and/or install a yellow (LED) bulb instead.
- Plant a pollinator garden, even a small one.
- Add a water source to your yard.

Gimme shelter, hoomans!

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- The following pages list ecologically significant native plants to use in your landscape in NCW. (The lists are not necessarily complete.)
 - Trees and shrubs form the skeleton of any landscape. The right ones can provide year-round cover for multiple species.
 - If you have room, start with a native tree and plant shrubs, perennials, and/or groundcovers in a bed around it.
 - Plant everything in groups. A thicket of shrubs can provide food as well as shelter from cats and other predators.
 - Plan ahead and start small.

Ecologically productive native plants

TREES AND SHRUBS	Caterpillar host	Bears fruit	Butterfly nectar	Hummingbird nectar	Seeds for birds	For pollinators
Douglas maple	X				X	X
Mountain alder	X				X	
Douglas hawthorn	X	X	X	X		X
Ponderosa pine	X				X	
Black cottonwood	X				X	
Quaking aspen	X					
Western mountain ash		X				X
Serviceberry	X	X		X		X
Kinnikinick (groundcover)	X	X	X	X		X
Ceanothus	X		X		X	X
Bitter cherry, chokecherry	X	X	X	X		X
Scouler's willow (upland sp.)	X		X			X

Ecologically productive native plants

SHRUBS	Caterpillar host	Bears fruit	Butterfly nectar	Hummingbird nectar	Seeds for birds	For pollinators
Red-osier dogwood	X	X	X	X		X
Oceanspray	X		X	X	X	X
Common snowberry	X	X		X		X
Rabbitbrush	X		X		X	X
Currants (golden, wax, red)	X	X		X		X
Rose (Nootka, Wood's)	X	X	X	X		X
Blue elderberry		X	X	X		X
Orange honeysuckle (vine)			X	X		
Mockorange			X	X	X	X
Western clematis (vine)			X		X	X
Oregon grape			X	X		X
Purple sage			X	X		X

Ecologically productive native plants

PERENNIALS	Caterpillar host	Bears fruit	Butterfly nectar	Hummingbird nectar	Seeds for birds	For pollinators
Pearly everlasting	X		X			X
Showy milkweed	X		X	X		X
Buckwheats (Eriogonum spp.)	X		X		X	X
Lupines	X		X		X	X
Western Canada goldenrod	X		X			X
Indian paintbrush	X		X	X		X
Fleabanes (Erigeron spp.)	X		X		X	X
Yarrow			X		X	X
Arrowleaf balsamroot			X		X	X
Blanketflower			X		X	X
Blue flax			X			X
Orange globemallow				X		X

Ecologically productive native plants

PERENNIALS AND GRASSES	Caterpillar host	Bears fruit	Butterfly nectar	Hummingbird nectar	Seeds for birds	For pollinators
Asters			X		X	X
Coyote mint			X	X		X
Red columbine				X	X	
Scarlet gilia			X	X		
Penstemons	X		X	X		
Fireweed	X			X		X
Hairy golden aster			X		X	X
Indian ricegrass	X				X	
Pinegrass	X				X	
Bottlebrush squirreltail	X				X	
Idaho fescue	X				X	
Basin wildrye	X				X	

A close-up photograph of a bumblebee with iridescent blue and black fur, positioned on a bright yellow flower. The background is dark, making the bee and flower stand out. The image is partially obscured by a white, torn-edge border on the right side.

Don't forget the pollinators!

- Moths and butterflies are pollinators as well as bees. So are ants, bats, beetles, birds, hummingbirds, flies, and wasps.
- Pollinators enhance plant reproduction and are therefore critical.
- Habitat loss, habitat fragmentation, pesticides, disease, and parasites are threatening pollinator populations everywhere.
- Pollinator habitats include plants that flower throughout the growing season, providing a source of nectar, pollen, and cover for adult and immature pollinators and habitat for other creatures.

A close-up photograph of several yellow flowers with prominent red centers, likely a species of goldenrod or similar. The flowers are in sharp focus, while the background is blurred, showing more of the same flowers and some green stems.

Tips for creating a pollinator garden

- Choose a sunny, well-drained site.
- Make sure there's something blooming from early spring through fall; e.g., Scouler's willow, Oregon grape or arrowleaf balsamroot, blanketflower, blue flax, western Canada goldenrod, snow buckwheat, and rabbitbrush.
- Include flowering shrubs if you have the room.
- Plant in groups to make it more efficient for pollinators to move from flower to flower.
- Don't use pesticides or herbicides.
- Lots of native bees live underground, so avoid using landscape fabric or heavy mulch.



Water sources for wildlife

- Whether a simple shallow bowl, a bubbler, a creek, a small water feature, or a full-sized pond, fresh water will attract birds and other animals.



Make your wildlife habitat more enticing

- Add a bat house near water or on the edge of a woods. (Check out BatsNorthwest.org for ideas.) No maintenance required. Not sure it's being used? Look for guano on the ground below.
- Install functional nesting houses instead of decorative bird houses in song-bird size or small owl/kestrel size. Maintenance is required, though.
- Got a dead tree? Make a snag for woodpeckers.
- If it's fire-safe, and you don't have a rat problem, construct a habitat pile. Stack logs, branches, and sticks in 3-5 layers to provide shelter for wrens, mice, voles, chickadees, squirrels, and snakes.





Landscape maintenance tips

- Avoid using pesticides or herbicides.
- Don't cut your grasses and perennials back in the fall. If you like your garden a little tidier, wait until the birds have eaten the seeds to deadhead perennials. Larval host plants like grasses and some perennials might have someone overwintering in them.
- For spring clean-up, wait until the soil is consistently above 50 degrees and you see pollinator activity. Leave leaf litter and twigs.
- Learn how to prune properly. In general, prune shrubs right after flowering.

Resources

- NWF-Canada, Garden for Wildlife (on YouTube), Episode 7: “Nature’s Best Hope,” with Dr. Douglas Tallamy, University of Delaware.
- Native Plant Finder from National Wildlife Federation, www.nwf.org/nativeplantfinder
- “If you build it, they will come—Fun wildlife habitat enhancements,” <http://youtu.be/nj33Xn5qWwg>.
- Xerces Society, Washington Biology Technical Note 24 (Revised): Plants for Pollinators in the Inland Northwest <https://www.xerces.org/sites/default/files/publications/13-004.pdf>
- Derby Canyon Natives, Peshastin, Washington, Plants for Birds and Butterflies derbycanyonnatives.com/plants/for-birds-and-butterflies/

Further Reading

- “Nature’s Best Hope: A New Approach to Conservation that Starts in Your Yard,” Douglas W. Tallamy.
- “The Living Landscape: Designing for Beauty and Biodiversity in the Home Garden,” Douglas W. Tallamy and Rick Darke.
- “Attracting Native Pollinators: Protecting North America’s Bees and Butterflies” The Xerces Society.
- *You can contact me at SeasonsUrbanHorticulture@gmail.com or 216.952.7750.*