USDA Forest Service

Urban Forest Connections

Second Wednesdays | 1:00 – 2:00 pm ET
www.fs.fed.us/research/urban-webinars

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WILDLIFE CONSERVATION IN CITIES AND SUBURBS: RESEARCH, PROGRAMS, TOOLS

Susannah Lerman
Research Ecologist
USDA Forest Service & University of Massachusetts Amherst

David Mizejewski
Naturalist: Media/TV
National Wildlife Federation

Naomi Edelson
Director, State and Federal Wildlife Partnerships
National Wildlife Federation
GARDEN FOR WILDLIFE

Attracting Birds, Butterflies and Other Backyard Wildlife

David Mizejewski
Naomi Edelson
National Wildlife Federation Naturalist
National Wildlife Federation has been encouraging people to plant landscapes for wildlife since 1973.

There are two main goals of the program: helping wildlife and helping people.
Plants are the foundation of the food web in any ecosystem.

That includes the urban, suburban and rural ecosystem.
90% of the insects that eat plants can develop and reproduce only on the native plants with which they share an evolutionary history.  
(Forister et al. 2014)

Insects are the next critical level of the food web.
Native plant communities = healthy wildlife populations.

The act of planting for a purpose is the definition of gardening.

NWF advocates this special kind of gardening:

Gardening for Wildlife
Everyone loves birds and butterflies.
But other kinds of wildlife are important and need habitat too....
GARDEN FOR WILDLIFE

…even wildlife that might scare us…
GARDEN FOR WILDLIFE

…or species that might be a garden nuisance…
GARDEN FOR WILDLIFE

…and even predators.
GARDEN FOR WILDLIFE

Gardening for wildlife connects people to nature.
All wildlife needs four things to survive:

1. FOOD
2. WATER
3. COVER
4. PLACES TO RAISE THEIR YOUNG
Plants are the best food source.
FOOD FOR WILDLIFE
FOOD FOR WILDLIFE
96% of terrestrial birds rely on invertebrates to feed their young.
FOOD FOR WILDLIFE
Birds that eat insects

- Icteridae (blackbirds & orioles)
- Fringillidae (finches)
- Ploceidae (weaver finches)
- Passeridae (Old World Sparrows)
- Podicipedidae (grebes)
- Ardeidae (herons)
- Threskiornithidae (ibises & spoonbills)
- Anatidae (ducks, geese & swans)
- Accipitridae (hawks, kites & eagles)
- Falconidae (falcons)
- Phasianidae (turkeys & grouse)
- Odontophoridae (new world quail)
- Rallidae (rails, gallinules & coots)
- Aramidae (limpkins)
- Gruidae (cranes)
- Charadriidae (plovers)
- Recurvirostridae (avocets & stilts)
- Jacanidae (Jacana)
- Scolopacidae (sandpipers & phalaropes)
- Laridae (gulls & terns)
- Columbidae (pigeons & doves)
- Cuculidae (cuckoos & roadrunners)
- Tytonidae (barn owls)
- Strigidae (owls)
- Caprimulgidae (goatsuckers)
- Apodidae (swifts)
- Trochilidae (hummingbirds)
- Trogonidae (trogons)
- Alcedinidae (kingfishers)
- Picidae (woodpeckers)
Red-bellied woodpecker weighs 8 times more than a chickadee!
It’s not just birds that need insects.
FOOD FOR WILDLIFE
FOOD FOR WILDLIFE
FOOD FOR WILDLIFE
All animals need water to drink or bathe.
WATER FOR WILDLIFE
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WATER FOR WILDLIFE
WATER FOR WILDLIFE
WATER FOR WILDLIFE
WATER FOR WILDLIFE
WATER FOR WILDLIFE
Prey and predator need cover
COVER FOR WILDLIFE
COVER FOR WILDLIFE
COVER FOR WILDLIFE
COVER FOR WILDLIFE
COVER FOR WILDLIFE
PLACES TO RAISE YOUNG

Wildlife needs resources for courtship, mating, nest building, egg laying, giving birth and caring for young.
Wildlife use many of the same features that offer cover as places to raise their young.
PLACES TO RAISE YOUNG
PLACES TO RAISE YOUNG

Cavity nesters use holes in trees as nesting spots, but many will also use a well-placed nesting box too.
PLACES TO RAISE YOUNG
Some species have special habitat requirements for their young that are totally different than their adult phase.
Monarch populations have plummeted 90%.

Plant milkweed and nectar plants!
SUSTAINABLE GARDENING

How you garden makes a difference.

Mimic nature and you’ll have less of an impact.
We must keep domestic animals under control. Rely on nature for pest control.
SUSTAINABLE GARDENING
SUSTAINABLE GARDENING
NATIVE PLANTS

Adapted to local soils
Adapted to regional precipitation
Resilient and hardy once established
Relationship with native wildlife

Salal
Western Serviceberry
Oaks = 557 species of caterpillars
Ginkgo = 4 species of caterpillars
Abundance

Uninvaded

Invaded
Caterpillars on July 26 2014

White oak          233 caterpillars: 15 species
Black cherry        53 caterpillars: 10 species
Burning bush         2 caterpillars:    1 species
Bradford pear          1 caterpillar:    1 species
The relationship between birds and native plants is also specialized!

<table>
<thead>
<tr>
<th>Season</th>
<th>Fruit Type</th>
<th>Nutritional Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer</td>
<td>Berries</td>
<td>High sugar</td>
</tr>
<tr>
<td>Fall</td>
<td>Berries</td>
<td>High fat</td>
</tr>
<tr>
<td>Late Winter</td>
<td>Berries</td>
<td>High sugar post freeze</td>
</tr>
</tbody>
</table>
Most (all??) non-native berry producers are phenologically out of sync with the needs of our birds.

They produce high sugar berries in the fall instead of the summer.
The nutritional difference between invasive exotic berries and natives is significant.

<table>
<thead>
<tr>
<th>Native</th>
<th>% fat</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Myrica pennsylvanica</em></td>
<td>50.3%</td>
</tr>
<tr>
<td><em>Viburnum dentatum</em></td>
<td>48.7%</td>
</tr>
<tr>
<td><em>Lindera benzoin</em></td>
<td>48.0%</td>
</tr>
<tr>
<td><em>Cornus racemosa</em></td>
<td>34.9%</td>
</tr>
<tr>
<td><em>Parthenocissus quinquefolia</em></td>
<td>23.6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-native</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Rosa multiflora</em></td>
<td>0.9%</td>
</tr>
<tr>
<td><em>Lonicera spp.</em></td>
<td>0.7%</td>
</tr>
<tr>
<td><em>Rhamnus cathartica</em></td>
<td>0.5%</td>
</tr>
<tr>
<td><em>Elaeagnus umbellata</em></td>
<td>2.1%</td>
</tr>
<tr>
<td><em>Celastrus orbiculatus</em></td>
<td>2.6%</td>
</tr>
</tbody>
</table>
Past criteria for choosing plants for our landscapes
Future criteria for choosing plants for our landscapes
To share our neighborhoods with wildlife, we need to:

- Create corridors connecting natural areas
- Reduce the area now in lawn
- Begin the transition from exotic ornamentals to native ornamentals
<table>
<thead>
<tr>
<th>Home</th>
<th>Apartment or Rooftop Garden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workplace</td>
<td>Park or Community Garden</td>
</tr>
<tr>
<td>Farm</td>
<td>Place of Worship</td>
</tr>
<tr>
<td>School or University</td>
<td></td>
</tr>
</tbody>
</table>
CERTIFIED WILDLIFE HABITAT

This certificate recognizes the establishment and maintenance of an official wildlife habitat.
COMMUNITY WILDLIFE HABITAT

Certified:
Alki
Bainbridge Island
Bellingham
Camano Island
Edmonds
Fidalgo Island/Anacortes
Lake Forest Park
Kirkland
Mukilteo
Sammamish
Shoreline
Skagit Valley
Surrey Downs
Tukwila
Whidbey Island

Registered:
Bonney Lake
Brier
Burien
Crescent Valley BMA
Edgewood
Friday Creek
Mercer Island
Newcastle
Poulsbo
Queen Anne
Redmond

Seattle area has the highest concentration of Community Wildlife Habitats in the country!
RESOURCES

- **Birds & Blooms**
  - Annual Hummingbird special issue
  - The magic of hummingbirds
  - After 10 years—success!
  - Secret behind amazing nesting video
  - Heartwarming rescue stories
  - Get rid of ants at your feeder
  - DIY sugar-water feeder from a baby food jar
  - True or false? Top wildlife myths

- **Gardening How-To**
  - Attract birds!
  - Japanese garden
  - Outdoor lighting
  - Preserve your harvest
  - Enjoy homegrown fruits and veggies all winter
  - Colorful coneflowers
  - 54 new varieties you'll love!
  - Plant this, not that
  - Replace invasives with look-alikes
REGIONAL RESOURCES

NWF Pacific Regional Center
http://www.nwf.org/Regional-Centers.aspx

WA Department of Fish and Wildlife
http://wdfw.wa.gov/wlm/backyard/

Washington Native Plant Society
http://www.wnps.org/index.html
Birds, Butterfly Lies and Other Backyard Wildlife

Naturalist David Mizejewski

3,071 likes • 305 talking about this

Arts & Entertainment • Environmental Conservation • Add A Category
This is the official fan page for National Wildlife Federation Naturalist and Media Personality David Mizejewski. If you love wildlife and nature, click "like" to get links to David's latest TV and radio appearances, videos and blog posts.
Gardening Tips

Attract It!
- Bird Feeding 101
- Attracting Birds
- Bird Watching Tips
- Attracting Butterflies
- Attracting Amphibians
- Attracting Dragonflies
- Attracting Hummingbirds
- Attracting Wildlife With Dead Trees

Build It!
- Build a Bat House
- Build a Bee House
- Build a Nesting Box
- Build a Gourd Bird House
- Build a Backyard Pond
- Create a Brush Shelter

Certified Wildlife Habitat
Like You like this.

Create a Wildlife Habitat
Step 1 - Provide Food
Step 2 - Supply Water
Step 3 - Create Cover
Step 4 - Give Wildlife a Place to Raise Young

CERTIFY NOW
Liven up your garden.

FIND PLANT LIFE

FIND WILD LIFE

VIEW MY GARDEN
American beauties takes the guess work out of gardening with native plants

American Beauties Native Plant is a ground-breaking program that offers proven solutions for your landscape while creating beautiful gardens for desirable wildlife. American Beauties take the guess work out of native plant gardening by providing plants and landscape solutions that fit your site.

Find the best native plants all dressed up in distinctively branded pots along with fact-filled tags and instructive handouts at your local Garden Center. By purchasing American Beauties Native Plants® you will be supporting the National Wildlife Federation’s efforts to inspire Americans to protect wildlife for our children’s future.
RESOURCES

Garden for Wildlife newsletter

- Practical Tips
- NWF expertise
- Wildlife and plant focus
- Informed by what participants want

[Link to NWF Garden for Wildlife website: www.nwf.org/garden]
Inspiring Americans to Protect Wildlife for our Children’s Future.

www.nwf.org/garden