nongame leaflet #3 second edition

Backyards for Wildlife

Idaho Fish and Game's Nongame, Endangered, and Watchable Wildlife Program

The Idaho Department of Fish and Game's Nongame, Endangered, and Watchable Wildlife Program (Nongame Program) was first formed in July 1982. The Department had long been interested in the welfare of nongame wildlife when the Idaho legislature established the state's first tax checkoff on the 1981 income tax form. It was the funds derived from the checkoff that allowed the establishment of a legitimate nongame wildlife program. State taxpayers contributed a portion of their refunds to the conservation of species not hunted, trapped, or fished (more than 80 percent of Idaho's wildlife species).

In 1992, the Idaho Legislature passed a wildlife license plate bill that allowed a portion of the Bluebird Plate proceeds to benefit the Nongame Wildlife Program. The Elk Plate was introduced in 1998 and the Trout Plate in 2003 to support the increasing demands on the program. Idaho's Nongame Program includes species research, surveys, monitoring, workshops, watchable wildlife viewing sites, wildlife events, and publications like this.

Go Wild! Buy Wild!

INVEST IN IDAHO'S WILDLIFE

Wildlife plates are available at the vehicle licensing offices of every county assessor. Just bring the vehicle registration with you and purchase it for either a Bluebird Plate, an Elk Plate or Fish Plate. Your support helps Department of Fish and Game's nongame wildlife conservation, education, and recreation programs. For a statewide list of assessor's offices, check this website:

http://itd.idaho.gov/dmv/vehicleservices/assessor.htm

Contribute to the nongame wildlife fund when you prepare your taxes! It is easy and, besides wildlife license plate sales, it is the *only* state source of income for the nongame program.

Table of Contents...

Share Your Yard With Wildlife
2

What's Good for Wildlife May Also Be Good For You
3

The First Steps
4

For a Wildlife Friendly Yard
5

Some Basic Principles
6

Water
7

Plants for Food and Cover
9

Trees
10

Flowering Plants
11

Shrubs
12

Hummingbird and Butterfly Gardens
13

Managing Weeds
14

Supplemental Bird Feeding
15

Types of Feeders
17

Helping Birds Find a Home
20

Bat Houses
22

Insect Shelters
23

Reptile and Amphibian Shelters
24

Attracting Residents Requires Patience
24

Nuisance Animals
25

Pesticide Use
31

Certifying Your Yard
32

Anise swallowtail caterpillar Kent Fothergill

Share Your Yard With Wildlife

Idaho residents are fortunate in being surrounded by a rich assortment of wildlife. One survey has shown over 80% of Idahoans spend time each year enjoying wildlife through activities such as observation and photography. Most of us do not have as many opportunities as we would like to visit remote areas for viewing and enjoying the remarkable animals that share our state. Luckily, some of that experience can be captured by creating a yard that is inviting to the animals that share our neighborhoods. Even in the midst of urban areas, Idahoans can still attract and observe a surprising variety of animals. However, the growth of cities, increasing industrialization, encroachment of development into natural areas, and pollution of the air, water, and soil threaten the precious wildlife resources that we treasure. A yard that is welcoming to wildlife can provide an oasis for animals that might otherwise be forced to move or even disappear from the state completely.

Male yellow warbler, USFWS

Human activities greatly alter the landscape, fragmenting wildlife habitat and reducing the ability of many animals to survive. Miles of roads, highways, and freeways create dangers for animals that need to cross during their daily activities. Many of these barriers can be overcome if we landscape with wildlife in mind. Your yard, if it provides the basic needs for wildlife, can improve the ability of many animals to survive and help maintain wildlife diversity. You can make a difference for Idaho's wildlife and enhance your own environment at the same time.

Attracting wildlife into your yard can be as simple as planting a native flower, to invite butterflies, or as elaborate as providing a variety of habitats for a wide range of wildlife species. Creating a wildlife-friendly yard can fit everyone's energy level and budget. Many people begin by a single act, such as hanging a hummingbird feeder, and become so delighted by the results that they widen the scope of their efforts to attract other wildlife.

Columbine, Reny Parker, renyswildflowers.com

What's Good for Wildlife May Also Be Good For You!

Any step taken toward accommodating the needs of wildlife can reap abundant rewards, because a welcoming yard provides benefits to people as well. Planting trees and shrubs that provide food and shelter for wildlife can also:

- Moderate temperatures around your house, keeping your property warmer in the winter and cooler in the summer, helping to lower heating and cooling bills.
- Reduce the impacts of strong winds by sheltering your house.
- Provide a greater degree of privacy from neighbors and traffic.
- Prevent soil erosion, especially if you have sloping areas on your property.
- Reduce noise from surrounding activities.
- Improve air quality.

Replacing areas of lawn grass with **native** trees, shrubs, grasses, and wildflowers can also decrease water needs and expenses, and reduce the amount of time you need to spend on chores such as mowing. Non-native flowers, shrubs, and trees are plants that have been introduced to Idaho by humans. Some introduced palnts are classified as "invasive" because they lack natural controls in their new environment and these plants choke out native plants that wildlife depend upon. You may be tempted to plant some non-natives for their abilities to provide food and shelter for wildlife, or for their beauty. Be careful not to plant invasives and look for native equivalents that furnish the same bounties and won't take over your yard.

Kinnikinik, Reny Parker, renyswildflowers.com

Replacing non-native plants with natives can also eliminate the need for herbicides and artificial fertilizers, preventing contamination of soil and water. Our own health, and that of wildlife, is directly related to the quality of our surrounding environment.

The less tangible benefits that result from inviting wildlife into your yard may be even more compelling than the easily measured ones. You may sharpen your observation skills, thrill to the sight of animal behavior not often seen, renew and maintain a connection to the natural world, provide children with a sense of respect for the animals that share their yard, and just have fun!

"What is man without the beasts? If all the beasts were gone, men would die from a great loneliness of spirit. For whatever happens to the beasts, soon happens to man. All things are connected."
~ unknown

The First Steps

Creating a plan is the first step in making your yard attractive to wildlife.

- Look at your property and determine the areas to devote to wildlife and those to keep for your own uses (such as a children's play area or pet exercise space).
- Factor in the energy and budget you are willing to devote to the effort.
- The level of landscaping that already exists also needs to be considered. A bare yard with little or no landscaping offers endless opportunities for enhancing wildlife attractiveness, but will take years to become an effective sanctuary. On the other hand, a yard with mature landscaping may limit possibilities (without major work), but is likely to show increased wildlife use in a short period of time.
- Explain to your neighbors what you are doing and the benefits your efforts will provide. It might even convince them to join in the fun and create wildlife-friendly yards of their own!
- Keep in mind the conditions unique to your location. The type of landscaping appropriate for property in the southern Idaho desert may not be effective for land in the northern Idaho mountains. You may need to landscape the edges of your property to reduce fire danger, prevent erosion, or reduce the risk of flooding.
- Now decide what you would like to attract. Does your interest lie in birds, butterflies, mammals, reptiles, or amphibians? Or would you like to attract a wide variety of wildlife? Many features that attract one type of animal will also benefit others. However, realize the limitations set by your location. Your ability to attract amphibians in the middle of the desert is minimal, but you may be successful if you live close to a natural waterway.
- Create a scale drawing of your property, sketching in all of the buildings, large plantings, and other features such as fences and driveways. Graph paper may make drawing to scale easier, or computer software allows the creation of a customized plan without the need to draw. Indicate the structures and plants that you could replace with components more valuable to wildlife. But do not automatically cut down a dead or dying tree. A dead, standing tree (snag) is a haven for many types of birds. They may nest in a cavity, eat insects that burrow into the bark, or perch in the branches.

You can add new landscaping features directly to your sketch, use transparent overlays to try out a variety of ideas, or show progressive steps if you decide to implement your plan over several years. A series of computer simulations indicating steps in the landscaping process can be useful. When you place new plants onto your plan, be sure to allow for their mature size, or you may end up planting them too close together. Planning on paper or on the computer before you begin can prevent costly landscaping mistakes.

Another useful step is to photograph areas of your yard as a baseline. You may find pleasure and satisfaction in looking at pictures that record your landscaping progress. Start small, and do one improvement at a time.

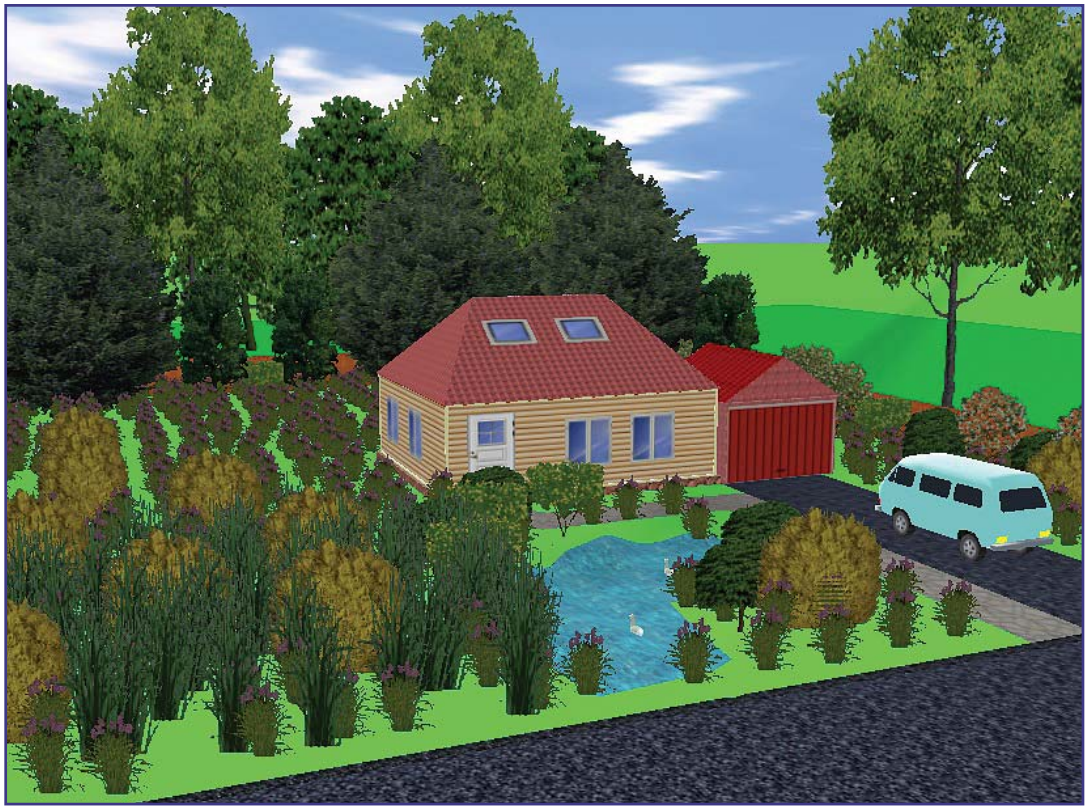
Goldfinch, Larry Barrett

Simple-one step projects to attract wildlife

- Install a birdfeeder or birdbath
- Construct a birdhouse
- Plant a flowering shrub
- Create a rock pile
- Plant a native fruit producing plant

For a Wildlife-Friendly Yard, MAXIMIZE...

- **Diversity.** Provide as much diversity as possible in plant types, heights, blooming seasons, pollinator species, plant shape, and the distances between plantings.
- **Density.** Plantings and features of varying density also help accommodate a variety of animals. Closely packed (dense) plantings or other features (such as brush piles) can be provided, as well as more open groupings and completely open spaces.
- **Edge.** The transition zone between two types of habitat (such as a cluster of trees and a wildflower area) is defined as "edge." *This is the area with the highest concentration of wildlife*. To provide edge, layer your plantings to provide animals with a choice of habitats for gathering food, taking shelter, and making a home. By accommodating all of an animal's needs, they may frequent your yard more often.
- **Travel routes.** Animals need to move onto and through your property. Unless you mainly want to attract animals that fly (birds, butterflies), you need to provide access onto your property and corridors through it. You will also want to walk through your yard to prune, weed, mulch, or just observe. Leave some travel routes through your property for these purposes.



Computer landscaping model courtesy of Snake River Xeric in cooperation with Native and Xeric Plants LLC.

Some Basics Principles

Idaho Native Plant Society
http://
www.idahonativeplants.org

Idaho Master Gardener
http://
www.ag.uidaho.edu/org/

Most yards featuring lawn or grass turf do not provide much wildlife value. Minimizing lawn is one of the first steps you can take when creating your plan. By reducing or eliminating lawn grass on your property, you will also decrease your water needs, lower your yard maintenance needs when replacement plants have become established, and add interest and diversity to your property.

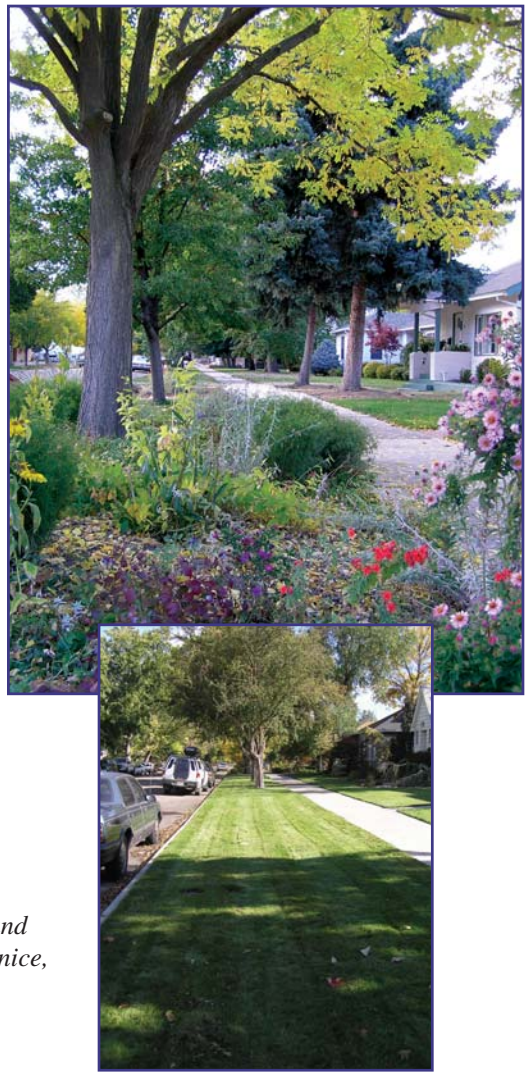
When adding new plants, remember to use native species suited to your location as much as possible. Look at undeveloped land near your property and observe the kinds of plants that grow there. You can often identify unfamiliar plants by looking them up in a plant field guide. County extension agents or master gardeners may also provide helpful information about plants native to your area. In addition, contact your local chapter of the Idaho Native Plant Society for native plant sales and native plant information. Most nursery staff can help you distinguish between native and non-native plants.

Many native plant seeds or seedlings can be purchased from local nurseries. You may also be able to get permission to salvage native plants from areas about to be developed. Keep in mind that many plants native to Idaho (such as arrowleaf balsamroot) have extensive root systems and can only be collected when *very* small. Never collect wild plants unless they are threatened by development and you have gained permission, because you could diminish the wild populations.

Besides plants, you might add other features to your master plan that benefit wildlife. A pond or other water source can satisfy an essential need for almost every kind of animal. Rock piles or walls can provide hiding spots for lizards and insects. A woodpile or brush pile can shelter rabbits, toads, and garter snakes. Hollow logs or covered pieces of culvert create temporary havens for many animals.

As you fill in the details of the plan you created, you will need to keep in mind the four major needs of wildlife: **water, food, shelter, and space**.

"One feature of most yards that does not provide much wildlife value is grass or turf. Minimizing lawn is one of the first steps you can take when creating your plan."



Notice the difference between the turf on one lawn and the native landscaping on the other. They both look nice, but the landscaped yard is more inviting to wildlife. Photos by Sara Focht, IDFG

Water

Water is as vital to wildlife as it is to humans. Yet many people provide food and shelter and forget this essential component. Supplying water is the single best method of attracting the greatest diversity of wildlife.

If your property includes a natural water source, such as a pond, marsh, stream, or spring, don't drain or destroy these areas; animals will already be regular visitors. In developed areas where water is scarce, supplying water far from natural water features is extremely valuable to wildlife. This is especially true in the desert areas of Idaho where streams and ponds often dry up during long, hot summers. Satisfying the needs of many types of creatures by artificial means is easy.

The location of the water source you provide will determine the kinds of animals coming to drink and bathe. Some types of wildlife prefer an elevated source while others can access only water available on the ground.

The variety of containers you can use to provide water is limited only by your ingenuity. From a simple upturned garbage lid or pie tin set into the ground to an elaborate artificial pond complete with waterfall and pond plants, a water source can provide many opportunities for wildlife viewing.

A small source of ground-level water attracts mice, rabbits, salamanders, toads, snakes, lizards, quail, and even butterflies. The container should have sloping sides and a water depth of 2 to 3 inches. Sloping sides or an escape ramp in all water features are important so wildlife does not get trapped in the water, unable to leap out of steep sides. If possible, basins set on the ground should have multiple depths. For simple set-ups such as pans or lids, varying depths can be obtained by partially submerging a flat rock near the edge. A very shallow area will attract insects. If the pan can accommodate a rock sticking out of the water, it can serve as a resting or basking spot.

Plans for supplying water on the ground can be more complex than providing a simple dish, as mentioned above. Preformed tubs of different sizes, shapes, and depths—available at hardware stores and plant nurseries—make an easy way to create a small pond. You can add submerged native aquatic plants in pots, or fountains to provide mist and the sound of running water. If an elaborate set-up is within your budget, a waterfall can be a pleasant addition that attracts animals to your pond. Be aware that if you add fish to your pond, they may attract great blue herons, kingfishers, raccoons, and other animals that feast on fish.

Ground-based water sources should be located about 10 to 15 feet away from dense vegetation to allow visiting animals to notice stalking predators such as cats. Water sources set in sunny spots may attract a different clientele than those in a shady location (toads prefer the shade, while birds prefer the sun).

Most perching birds prefer elevated water sources. Bird baths, available commercially, can be inexpensive and are designed to accommodate most locations. Water containers can be suspended from a bracket mounted on a pole or pillar. Basins set on a deck railing come in a variety of shapes to fit into corners or up against supports. Adding devices that produce dripping or running water to any water feature is highly effective in helping

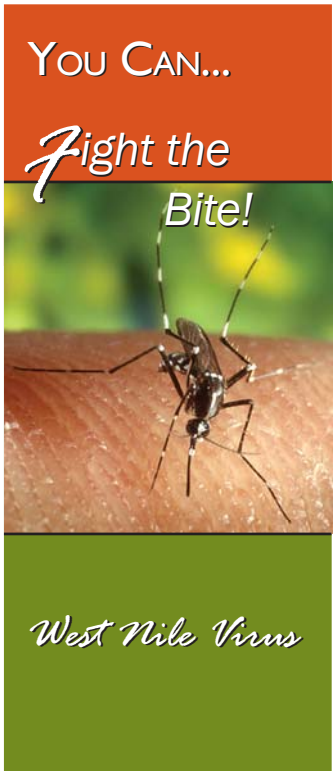
"Where there are birds, there is water."
- African-Orambo proverb

Photo by Carina DeWitt, Hidden Springs, Idaho

"Supplying water is the single best method of attracting the greatest diversity of wildlife."

Wood duck, Gregg Losinski, IDFG

Contact your local Idaho Fish and Game office for more info on West Nile Virus.



wildlife locate the source. You can build your own dripper by suspending a plastic bottle upside down over the water container with a small hole in the cap. Stores that supply bird seed and related items usually stock drippers that attach to an outside faucet and can be adjusted to provide a slow or fast drip rate. Misters that connect to a garden hose offer birds a refreshing spray. Recirculating fountains, available in different sizes, can also enhance wildlife visitations.

Many people supply water through spring, summer, and fall, but animals continue to need water throughout the winter. Winter water is especially important when natural sources freeze over or are dry. Keeping fresh water available all winter can be challenging and rewarding. You can place shallow, portable containers on the south side of your house to take full advantage of the sun's heat. Using a black container may enhance solar heating and keep the water ice-free at lower temperatures. Electric heaters designed to be submerged are also commercially available. These plug into an electric outlet; many are controlled by a thermostat that turns on the heat only when needed to keep the water from freezing. Larger tubs may need to be drained for the winter. And, of course, fountains and drippers should be removed when temperatures drop below freezing.

NEVER USE ANTIFREEZE to prevent ice formation in your water features. Antifreeze is a poison that will kill the animals that come to drink and possibly harm pets.

Water containers should be kept fairly clean to prevent the spread of disease and mosquito breeding. West Nile Virus has been detected in Idaho, so cleaning water containers around your yard is essential. Water containers can be emptied and scrubbed before refilling. Tubs not easily drained may require a circulation system that routes water through a cleaning filter. Just like people, animals like fresh water, so clean water containers every three to five days.

Adding a water feature to your wildlife plan will attract a greater number and variety of animals and is a sure-fire way to enhance your wildlife viewing opportunities. Maintaining water sources through the entire year is even better. Wildlife will benefit and so will you.

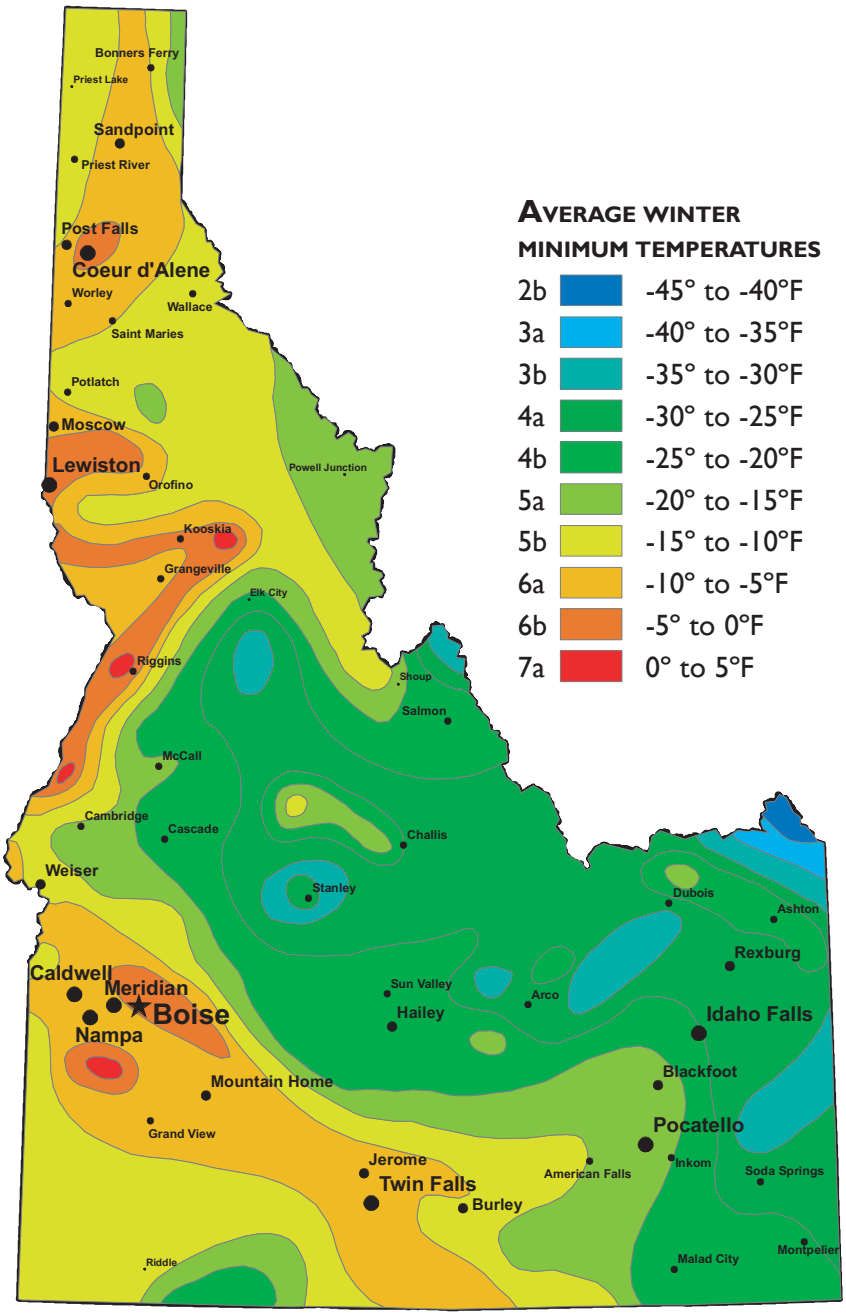
Mountain chickadee, Don Owens

Plants for Food and Cover

When it comes to choosing plants to enhance the wildlife attractiveness of your yard, go native! Indigenous plants are already adapted to the climate and soil type, live in balance with other plants and animals, and thrive with minimal maintenance. Choosing native plants can also be educational—an opportunity to become knowledgeable about local natural history.

Avoid planting in straight rows. A narrow strip of vegetation is not very useful to wildlife. Plant in clumps that vary in size and shape—curved or irregular contours also provide a natural appearance.

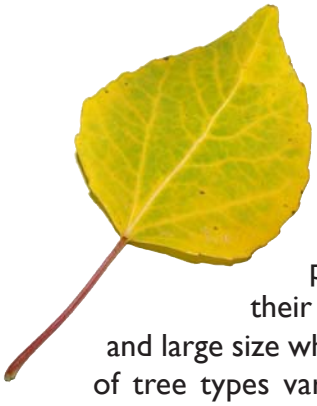
Learn the average frost dates in your area (the day of the last frost in the spring and the first frost in the fall). Planting is best done in the spring, when the soil is loose and a hard freeze is unlikely, or in the fall when the days are cool. Planting in the dry Idaho summer can be stressful on plants—especially trees and shrubs—because their roots need to be kept moist to reduce the shock of transplanting.



USDA Plant Hardiness Map

This map is an example of a tool you can use to determine what plants are best suited for your yard. Plants are catagorized with a "zone" to help landscapers know where the plants will succeed. Other factors, besides average winter minimum temperatures, must be taken into consideration. The amount of moisture present, aspect to the sun, light requirements, and soil type are also important factors for plant growth.

Trees



Introducing trees into your yard requires the greatest amount of planning because of their relatively slow growth and large size when mature. A diversity of tree types varying in height, shape, density, and reproductive form (fruit, berries, cones, pods, nuts) is ideal for a wildlife-friendly yard. However, if you have a small yard, trees that provide one or two aspects that increase wildlife value make the most sense. You may choose a tree that holds its fruit through the winter or provides a dense nesting place as well as a windbreak for your house. You may also be influenced by a desire to enjoy colorful fall foliage.

Tree suitability varies by climate. Choosing the ideal trees adapted for your area is likely to lead to success. Idaho is fortunate to contain high, mountainous areas with cold winters and cool summers, desert areas with hot, dry summers and mild winters, and climates in between. Keep these climate patterns in mind when visiting the nursery. See inside back cover for a few of Idaho's native trees.

Non-native, non-invasive trees that provide food for humans such as cherry, apricot, and apple trees, are attractive to a wide range of birds, mammals, and insects. If you're willing to share the bounties of your orchard, you will be rewarded with animal visitors that otherwise may not frequent your yard.

When deciding where to place trees, position evergreens on the north and west sides of your house to shelter your home from strong winds, snow, and hail. Plant deciduous trees on the south and east sides to provide shade in the summer, yet allow the sun to warm your house in the winter when they have lost their leaves.

Trees are beneficial alive, as well as dead or dying. Dead trees left standing, called *snags*, offer nesting sites for cavity-dwelling animals such as woodpeckers, kestrels, some owls, and raccoons. Snags also offer open-view perching sites for birds. Dying trees, usually housing insects, attract many insect eaters.

Fallen trees or rotting stumps can protect many small creatures: snakes, mice, toads, and salamanders. The decaying wood also adds nutrients to the soil.

Red squirrel, Donna Dewhurst, USFWS

"Without habitat, there is no wildlife. It's that simple."
- Wildlife Habitat Canada

Flowering Plants

Many people believe placing and planting flowers is the most delightful task of creating a wildlife-friendly yard. Sowing seeds allows pleasant anticipation of the garden that will develop. Planting fall bulbs brings the expectation of early spring color. *Perennial* plants come up year after year, while *annuals* bloom one season and then die. Some annuals readily reseed and sprout in force around the area of the original plant. *Biennials* last two years—growing their first year, blooming their second year and then dying.

You can plan your flower garden for a specific purpose or for more general use. If you're interested in attracting the biggest variety of birds, members of the sunflower family (asters, blanket flowers, daisies), called composites, work well. However, you may want to specialize in gardens designed to attract certain creatures such as hummingbirds or butterflies.

Flowers supply food for birds, butterflies, beetles, bees, and tiny wasps. Insects aid in pollinating your wildlife garden's plants and will also attract insect eating animals.

If you plan your flower gardens carefully, your yard will abound with color and wildlife throughout spring, summer, and fall.

When established, native wildflowers, native shrubs, and native trees will require less care than non-native plants. In addition, resident wildlife have already adapted to the native flowers and may prefer them to non-native flowers. See the table on the inside back cover for more information on flowers that are native to your area. As with trees and shrubs—don't ever dig up native flowers except with permission in an area about to be developed.

Western swallowtail, Kent Fothergill
Bee on groundsel, Forrest Vandyke

Shrubs

Shrubs provide an intermediate layer for your wildlife garden. Like trees, shrubs can provide food, nesting sites, and cover. However, shrubs are more versatile than trees because of their smaller size.

Shrubs can be open or dense, tall or ground hugging. Dense shrubs, such as native wild roses, offer small birds a safe place to nest. The open aspect of a forsythia permits birds to perch while watching for predators. Both of these shrubs also add color to the yard — brilliant yellow spring flowers on the forsythia and pink, fragrant flowers on the rose (along with edible rose hips in the fall). Wildlife is attracted to shrubs with berries such as gooseberry, currant, ninebark, and elderberry.

Lisa Hahn, IDFG

Choice and placement of shrubs depends upon soil type, light requirements, water needs, and personal preference. For example, some shrubs are shade tolerant and grow well under a larger tree, whereas other shrubs prefer the open sun.

Hummingbird and Butterfly Gardens

Maintaining a flower garden just for hummingbirds can be a rewarding experience for you and the birds. Hummers eat nectar and insects and need to feed about every 15 minutes during the day, offering ample opportunities to watch these acrobatic marvels dart among the blossoms. Tubular flowers in colors of red, orange, or pink are the most attractive to hummingbirds. Flowers that fit this description include columbine, scarlet gilia, and Indian paintbrush. If you're lucky, you may discover a thimble-sized hummingbird nest (about 1" across), usually built on limbs near water.

Rufous hummingbird

Butterfly gardens are also a popular choice with many urban and rural residents. Some butterflies are selective in their food choices. For example, monarch caterpillars require milkweed as their food source—nothing else will do. Parsnip, parsley, dill, fennel, and celery attract swallowtails. A variety of other butterflies visit blanketflowers, mallows, trilliums, clarkia, and wild strawberries.

In the fall, when the flowers have finished blooming, prepare the plants for winter. Many insect larvae overwinter on or under flower stems. An abundance of insects provide spring food for animals from lizards to birds. Therefore, let your flowers go to seed in the fall and avoid trimming seed stalks until spring when the plants begin to send up new growth. Tidying up plants, by cutting off old seed heads (deadheading) or pruning stems to the ground should *wait until spring.*

Managing Weeds

Managing weeds can be an issue in flower gardens as well as in vegetable gardens. Mulching your flower gardens can limit weed growth and keep moisture in the soil, an important consideration where the soil is sandy and drains quickly. Leaf, grass, straw, and bark chip mulches build up the soil, increasing organic matter as they decompose (although bark chips decay slowly). However, you need to replenish the covering as it decomposes. Try to avoid bark mulches made with cypress tree, because these gulf coast natives are becoming rare. Instead try to purchase mulches made locally. Pebbles, landscape fabric, and plastic sheeting are more durable and long lasting, but can make it difficult to add or replace plants.

Avoid spraying or disbursing herbicide in your flowerbeds for weed control. The chemicals may kill insects that benefit plants (such as pollinators and those insects that prey on damaging bugs) and unnecessarily contaminate the soil. The best ways to take weeds out is by hand or shovel.

So you're now proceeding with sowing your piece of earth. In addition to a green thumb, creating flower gardens requires a measure of hope and luck. Nature is unpredictable—hail may fall in June, or first frost may arrive weeks earlier than expected. Persevering with patience and good humor will increase your pleasure in the beauty you generated and allow you, the plants and wildlife, to become a part of the rhythmical changes of the seasons.

Purple loosestrife

Scotchbroom, J.S. Peterson, USDA NRCS PLANTS database

They may be beautiful, they may attract wildlife, they may even be sold in stores:

But AVOID THESE NON-NATIVE PLANTS!!!

- Butter and Eggs-toadflax
- Russion Olive
- Bachelor Buttons
- Purple Loosestrife
- Toadflax
- Euphorbia
- Bouncing Bet
- Ivy
- Butterfly Bush
- Russian Sage
- Scotchbroom

For more information on Idaho's weeds, visit:

Idaho Weed Awareness Campaign
Pulling Together
Against Invasive Weeds

http://www.idahoweedawareness.org

Supplemental Bird Feeding

You can increase the number and variety of birds that visit your yard by offering them food beyond the bounty supplied by the plants in your yard. Research indicates that more than 50 million Americans enjoy providing supplemental food for birds. Some birds will be year-round visitors to your feeder while others will dine for only a few days during their migration journeys. Your choice of food and feeder type will determine the species attracted to your yard. Birds vary widely in their food preferences, and feeders are available in a dizzying variety of styles and sizes. You can start by attracting a broad assortment of birds or specialize in inviting a favorite species. Patience is a virtue when trying to attract birds, so don't get discouraged if you don't have flocks of songbirds descending on a feeder you placed a week ago. Learn about the birds already in your neighborhood and start by attracting those.

Dark-eyed junco, Dave Herr, USFWS

When feeding seeds, providing each type of seed separately is usually better than setting out a commercial mixture. Even in higher quality mixtures, the most desirable seeds will be eaten preferentially, while less attractive seeds will be tossed out and go to waste. Seeds commonly found in low quality seed mixtures, but are not eaten, include canary seed, wheat, oats, and milo.

Black sunflower seeds are by far the most desirable to the widest variety of native birds in Idaho. The high fat content in black oil sunflower seeds put them at the top of the food list for many birds such as finches, grosbeaks, chickadees, nuthatches, and sparrows. The thicker shells of striped sunflower seeds prevent some birds from getting at the meats inside. Hull-less sunflowers are also available, but spoil quickly when they get wet.

Other highly desirable foods for Idaho birds include white millet, peanuts, and Nyjer. The millet will attract juncos, mourning doves, lazuli buntings, and cowbirds. Peanuts are a favorite of jays, woodpeckers, and flickers. Nyjer (also known as thistle seed) appeals to pine siskins, goldfinches, and chickadees.

Dried corn, as whole kernels, cracked pieces, or still on the cob, make a tasty meal for many upland game birds such as quail and pheasants. Don't use corn covered with a pink coating—the coating is capstan, a fungicide that prevents seed from molding after planting, and can kill birds or other animals that eat the corn.

Other foods that you may wish to try in your yard include safflower, popped popcorn, and walnut meats. Safflower seeds are generally ignored by nuisance birds such as house sparrows and starlings, and squirrels tend to dislike them, too. So if non-native birds or squirrels are marauding your sunflower feeders, switching to safflower seeds may discourage these pests. Popped popcorn

and walnut meats can lure birds to your feeders that would otherwise fly right by. Try it and see what happens!

Suet serves as a treat for many birds, including woodpeckers, chickadees, wrens, and nuthatches. Raw beef fat can be melted, the pieces of meat removed, and the remaining fat frozen. The suet can be frozen into cakes that fit into a commercially available wire basket, or you can place lumps of suet in a cloth net. Peanut butter is another fatty treat for birds such as woodpeckers. The suet or peanut butter can be mixed with corn meal, fruit pieces, sunflower meats, or small seeds. Mountain ash berries make a tasty addition to suet.

Feeding suet is mainly a cool weather activity. The fat boosts birds' energy reserves during periods of cold temperatures when other food is scarce. And in summer's heat, even commercially available suet cakes will liquefy in the soaring temperatures of a southern Idaho desert summer.

Not all birds eat seeds, and some seed-eaters also pursue other fare such as fruit and insects. Offering a wide variety of food will draw those omnivorous birds never seen at seed feeders. Halved oranges, peaches, grapefruit, or nectarines draw in the fruit lovers such as northern orioles, cedar waxwings, warblers, and tanagers. Grapes are also popular. Dried fruit, such as raisins, should soak in water for 30 minutes before setting out. Grape jelly attracts orioles and can be set out in shallow pans or cups. More "exotic" fruits, such as watermelon, bananas, cantaloupe, mangos, and papaya, can catch the attention of rarely glimpsed birds, especially during the spring and fall migrations.

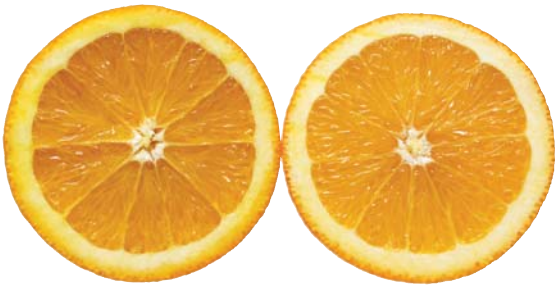
Insect eaters, like the popular bluebird and lazuli bunting, will flock to an offering of mealworms served up on a platform. Pet stores and bait shops usually sell mealworms. Some people use clean tuna cans mounted on a board, stump, or branch. If you'd like to provide insects, but don't enjoy handling mealworms, blocks of wood or cardboard with tiny holes containing mealworms are commercially available and mimic the way woodpeckers and other birds search for grubs under tree bark.

California quail, Bruce Haak, IDFG

In addition to food, you can help out birds by providing the grit they need to digest their meals. Birds do not have teeth; instead they eat tiny pieces of grit that help grind up food in their gizzard. Crushed eggshells make excellent grit for birds, but should be cooked at 200^{0}F for an hour to kill any microorganisms. The shells can be offered on a platform or spread on the ground. Setting out a dish of sand in your yard will also help birds satisfy this need.

Remember feeding wildlife, other than birds, is not recommended. If food set out for birds is being eaten by other wildlife, move the food to a safer location or discontinue feeding.

Mealworms



Types of Feeders

Feeder designs can accommodate any yard, budget, and ambition. Variety stores, pet stores, and feed and grain stores all sell feeders. But you're likely to find the largest selection and most knowledgeable people at shops that specialize in bird watching. Many fine feeders, from simple to elaborate, also can be built at home.

Ground platform feeder (left), Pat The Bird Man™ www.BirdMan-Inc.com

Local wild bird supplies: Bird House & Habitat 12598 W. Fairview Ste 101 Boise, ID 83713 208-375-8051 www.feederbirds.com

Other than spreading seed on the ground, **platform feeders** are among the simplest methods for feeding birds. Platform feeders are trays with a lip that keeps seeds, fruit, and insects inside. They can be set on the ground, hung from a tree branch or pole, or mounted on a railing or windowsill. Coconut shells cut in half, plastic flying disks, and plastic trays can function as platform feeders as well as the wooden feeders you can buy. Ideally, the base of platform feeders for seeds or fruit should be mesh (or screen) or should include drainage holes to allow water to drain, reducing the risk of food molding after a rain. Platforms for mealworms need to be solid and incorporate a lip tall enough to prevent the larvae from crawling out.

Add a roof to a platform feeder and you get a **fly-through feeder**. The roof protects the food from the elements. In general, fly-through feeders are best used for seeds. Insect-eating birds notice movement of their prey, so don't hide mealworms with a roof! Fruit is best offered on an open platform or simply attached to tree braches.

Flythrough feeder (right)

Hopper feeders have a seed reservoir that continuously supplies seed at the bottom for perching birds. Sunflower seeds, millet, corn, and peanuts work well in hopper feeders. Some hopper feeders also contain a cage for suet cakes on one or both sides.

Havahart Deluxe Dome Feeder (model #213VG) by Woodstream Corporation www.havahart.com

Tube feeders are cylindrical or square tubes that hold seed accessed by holes along the feeder, and generally are constructed of either plastic or metal. The type of seed appropriate for a tube feeder depends upon the size of the access hole. Peanuts require large holes, while sunflower meats can fit through much smaller holes.

Some tube feeders contain tiny slits that are the perfect size for Nyjer seed. Although Nyjer can be offered in a hopper feeder, its expense usually prompts bird lovers to offer it in a special Nyjer seed feeders so less seed goes to waste. Tube feeders with the perches set above the holes instead of below them allow only birds that will eat Nyjer while hanging up side down (goldfinches and pine siskins) to get at the seeds, discouraging non-native birds from eating up all the Nyjer seed.

Suet feeders are wire baskets sized to hold commercially available suet cakes. To protect the suet from the weather, some feeders come with a roof, which has the added advantage of allowing only clinging birds, such as nuthatches and woodpeckers, to get at the food. Home-made ways to offer suet and/or peanut butter is in pinecones, in holes drilled into logs, or in bottle caps nailed to a post.

Feeders are best placed where birds can see danger (a cat, for example) lurking near, but still have access to cover. Keep in mind that the area under a feeder will get messy with hulls (unless you feed only seed meats) and bird droppings. Domes, called baffles, placed above hanging feeders or below feeders mounted on poles discourage squirrels from raiding the seed.

Many birds (such as pheasant) take occasional dust baths to help remove parasites from their bodies. Providing a patch of finely ground soil allows birds to satisfy this need.

Adding **hummingbird feeders** to your yard can complement your garden flowers. You may want to start with a mixture of one part sugar to three parts water to attract the birds at first, and then lower the concentration to one part sugar to four parts water. Do not use red food dye in the mixture—the dye isn't good for the birds and most feeders are red so the hummers find them easily. Also, never use honey, which can become contaminated with botulism. Hang hummingbird feeders in the shade to slow fermentation of the sugar water. To prevent mold from growing in the feeder, empty, clean, and refill feeders at least once a week or every two to three days in very hot weather. Hummingbirds are quite territorial and defend their feeders fiercely. Therefore, if you want to attract as many hummers into your yard as possible, place the feeders out of sight of each other. Locating one at each of the compass points on your property usually works.

Red-breasted nuthatch, Bill Pilcher

All feeders require a thorough cleaning once a month to prevent diseases from infecting your feeder visitors. Some common diseases birds contract at bird feeders include Avian Conjunctivitis, Salmonellosis and Trichomoniasis. Symptoms of Conjuctivitis include red, swollen, watery, or crusty eyes. Avian Pox is another disease that can be recognized by wart-like growths on any non-feathered part of a bird. Salmonellosis and Trichomoniasis are difficult to detect, but birds may have behavior symptoms that include lethargy, disorientation, and lack of coordination.

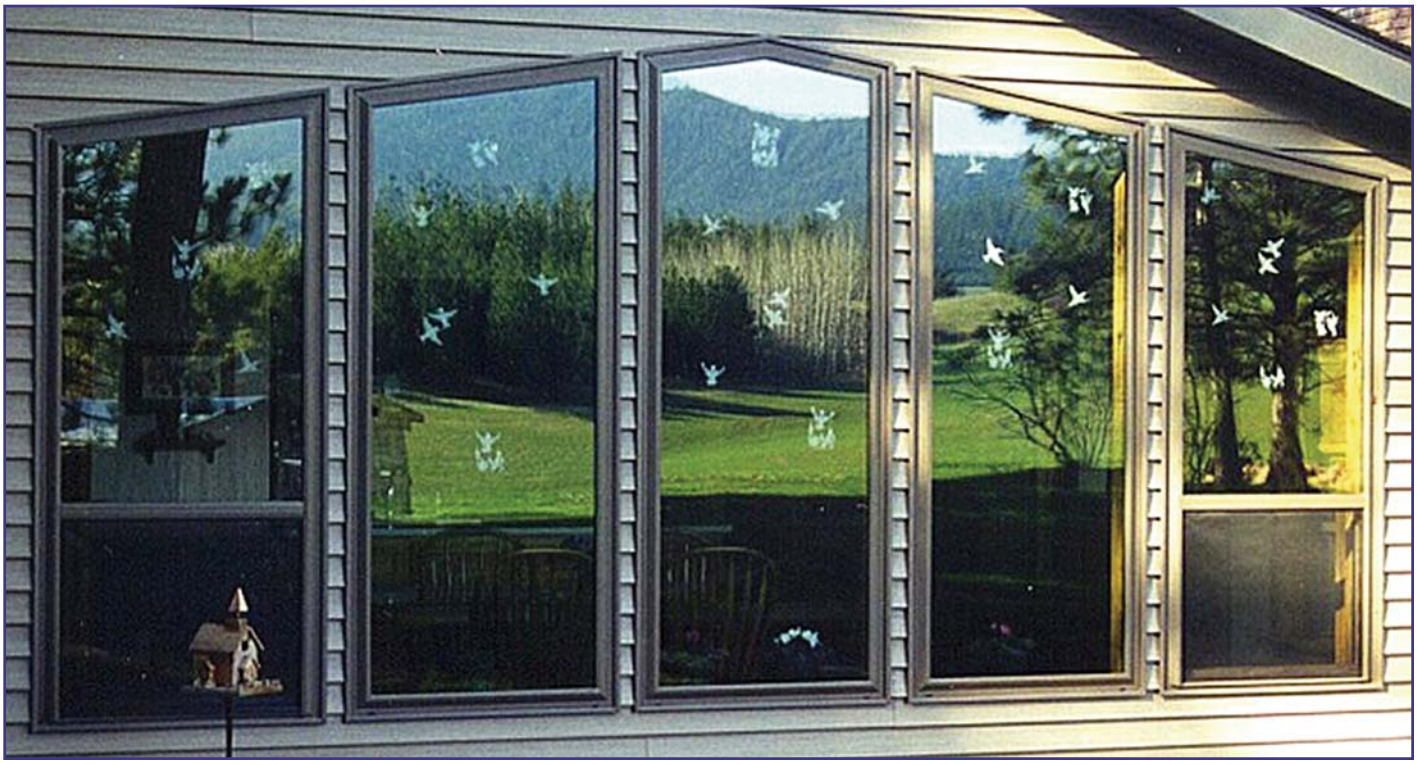
Cats kill over 1 billion birds in the U.S. each year. By keeping your cat inside, birds will be safer in your yard. For more information, visit the American Bird Conservancy website at http://www.abcbirds.org Photo by Sara Focht, IDFG

If you observe diseased birds at your feeder, take your feeder down immediately to stop contamination of other birds.

Most feeders can handle a soak in mild dishwashing detergent followed by a dip in 10% bleach water and air dried before refilling. Once a year, change the location of the feeder to separate birds from accumulated droppings on the ground. Throughout the year, clean up under the feeder and store feed in secure containers to prevent contamination from rodents and mold.

Although widespread feeding of wild birds allow some species to extend the northern limits of their range, no evidence indicates that supplemental feeding harms populations by enticing birds to over-winter in an area when they should migrate south. By feeding birds year-round, you'll become more closely connected to the patterns of nature's changes, learn the permanent residents from the seasonal visitors, and enjoy the active chatter of many bird voices as they share your space.

Downey woodpeck at suet feeder



Hanging bird silhouettes on large picture windows or windows near feeders will help prevent birds from crashing into your windows. Hanging an old CD or some shiny ribbon near your window are some other methods to prevent window collisions. Bird cut-outs can easily be made from home or purchased commercially. Photo Courtesy: Whispering Pines, www.wpines.com

Helping Birds Find a Home

Many bird species rely on hollow, dead, standing trees (snags) to nest in. As a property owner, you may need to remove standing dead trees to protect your property, collect firewood, or reduce fire danger around your house. If you can leave snags in your yard, you will notice the frequent use they get. If you cannot leave snags, or simply don't have any, you can help out some of your feathered neighbors by supplying bird houses in which to lay eggs and raise young. However, if you live in an urban or suburban area, you need to keep an eye on the bird houses you place on your property. Non-native birds (starlings and English [or house] sparrows) often take over bird houses, preventing the native birds from nesting. If this happens, open the bird house, clean out the starling or house sparrow nest, and destroy any eggs. These non-native birds are not protected under the Migratory Bird Treaty Act.

Just as in human real estate, *location* is critical to attracting birdhouse tenants. The most wonderful house will go unused if placed in a spot that allows predators easy access, bakes in the summer heat, or permits rain to blow in from the prevailing winds. Face the birdhouse entrance to the south or east. Those who live in the southern Idaho desert country can also orient the birdhouse entrance toward the north.

A birdhouse mounted on a pole is safe from most predators and can be moved relatively easily if it does not attract occupants after a year or so. Another effective method of mounting a birdhouse includes suspension from a wire or stout string. Attaching the bird house to the trunk of a live tree or a dead snag is also acceptable, but works best with larger birdhouses such as those for owls, wood ducks, or kestrels.

Wood is the best material for birdhouses, especially ¾" red cedar because of its ability to withstand prolonged exposure to the weather. Pine and plywood are also serviceable materials, but will not last as long. Leaving the wood natural may make the house more attractive to potential residents, but you can paint the outside (only) with latex paint to prolong its life. A tan, gray, or dull green color allows the house to blend into the natural environment. Avoid treated wood that can harm birds and metal that heats up in the sun and could bake the birds inside.

Photo by Carina DeWitt, Hidden Springs, Idaho

The feature of a birdhouse most important for determining who will nest inside is the *size of the entrance hole*. See the table on the next page for a list of entrance hole sizes and the birds that will use them. When constructing a birdhouse, drill the entrance hole on an upward slant to minimize the amount of rain that enters the hole. Each box should contain ¼" holes (about 4) in the floor to drain any water that gets in and a ¼" hole toward the top of two side panels to allow air circulation. Roughening up the inside surfaces by cutting grooves helps the young birds reach the opening when they're ready to fledge.

Snag, Rick McMullen

The house should have a removable roof or wall, to allow annual cleaning and the removal of non-native birds if necessary. A removable or hinged roof allows a look inside the box without harming any eggs or hatchlings inside. If the panel that opens is hinged, wire it shut. Raccoons quickly learn to open an unsecured panel or one that closes with a hook. *Don't attach a perch*—native birds don't need one and predators can use them to stake out the entrance only to attack the bird when it emerges.

At the end of the summer, open up the bird house, clean out the nesting material, and wipe out the box with a dilute bleach

Nest building materials you can provide

- Dead twigs
- Dead leaves
- Dry grass
- Yarn or string—cut into 4 to 8-inch pieces
- Human or animal hair (especially horse hair)
- Fur (dog or cat fur)
- Sheep's wool
- Feathers
- Plant fluff or down (cattail fluff, cottonwood down)
- Kapok, cotton batting, or other stuffing material
- Moss
- Bark strips
- Pine needles
- Thin strips of cloth, about 1 inch wide by 6 inches long
- Shredded paper

solution. These actions will eliminate pests such as fleas and prevent the spread of disease. Bird houses can over winter outside or be brought indoors. If you store them inside during the winter, be sure to place them outside very early in the spring.

The size of your property will limit the number of bird houses. In general, one acre can support one large birdhouse and four small birdhouses (designed for four different species). The smaller birdhouses should be 75 to 100 yards apart. For most urban and suburban dwellers, these limitations mean that a yard can hold only one bird house.

Some birds prefer a nesting shelf that you can attach to a wall of your house or to a pole. A three-sided box approximately 8" square with a roof and an open front placed 6 to 15 feet off the ground is appropriate for a robin or Say's phoebe. An osprey might be coaxed to construct a nest on a 4 x 4 foot platform mounted at least 20 feet above the ground if you live adjacent to a river or large lake. However, avoid placing nesting platforms near clusters of live power poles or other man-made structures that may be unsuitable for nesting. A barn swallow may surprise you by building a mud nest *under* a platform you provide.

For birds that prefer to build nests in trees, you can hang out a mesh bag containing a variety of nesting materials, such as short lengths of string or yarn, wool, feathers, and small twigs. Do not provide plastic of any kind. Birds that use mud to construct their nests benefit from a small area of dirt kept wet throughout the nesting season.

Black-capped chickadee

Bird house dimension specifications: Contact your local Idaho Fish and Game office for detailed birdhouse plans.

Bird Species	House Floor Size (in.)	House Height (in.)	Hole Above Floor (in.)	Entrance Hole Diameter (in.)	Mounting Height (feet)
Western Bluebird	4 x 6	8–12	7	1 9/16	4–6
Mountain Bluebird	6 x 6	9	7	1 9/16	4–10
Tree or Violet-green Swallow	4 x 6	6–8	1–5	1 1/2	10–12
Downy Woodpecker	4 x 4	8–10	6–8	1 1/4	6–20
Chickadee	4 x 4	8–10	6–8	1 1/8	6–15
Red-breasted Nuthatch	4 x 4	8–10	6–8	1 1/4	12–20
House Wren	4 x 4	6–8	4–6	1 1/4	5–10
Northern Flicker	7 x 7	16–18	14–16	2 1/2	6–20
Kestrel	8 x 8	16–18	13–15	3	15–20
Screech Owl	8 x 8	12–15	9–12	3	10–30
Barn Owl	10 x 18	15–18	6	>6	12–18
Wood Duck	10 x 18	10–24	middle	Oval–3 high/4 wide	6–8 over water 10–20 feet over land

Bat Houses

Fourteen different species of bats call Idaho home. Bats are beneficial animals, some eating up to 600 mosquitoes per hour and others pollinating flowers. Bat houses have become quite popular, but it can be difficult to attract bats to use them. Signs that you might be successful gaining bat tenants include living within ¼ mile of a year-round water source, having a large population of night flying insects, and having bats in the neighborhood.

Bat box, IDFG

Bat Conservation International http://www.batcon.org

Bat houses are narrow wooden boxes with the opening at the bottom. The bats land at the opening and crawl up into the house to roost during the day. Larger houses that accommodate greater numbers of bats often are more attractive than small houses.

Bat houses are best mounted on a pole or on the side of a building at least 16 feet above the ground. Locating a bat house in a tree exposes the bats to predation. Bats like it hot. In areas of Idaho where July temperatures average between 80°F and 100°F, the bat house should receive at least 6 hours of direct sunlight. If average July temperatures are lower than 90°F, the bat house should receive direct sunlight at least 10 hours each day. Mounting the box with southern exposure can help increase temperatures as well. Although it's best to leave bat houses unpainted, in higher elevations where July temperatures are relatively low, painting the *outside* of the bat house black with a nontoxic latex paint can increase the inside temperature.

Myotis bat

Bat house, Pat The Bird Man™
www.BirdMan-Inc.com

Insect Shelters

Butterflies seek shelter during periods of stormy weather. You can provide refuge for weary butterflies by hanging a butterfly house on a post or tree at least 15 feet above the ground. Adding some tiny twigs and other natural debris, such as crumbled leaves, inside the house can help the butterflies feel more at home. Placing the house in a flowerbed and near a water source (such as a pond or bird bath) will increase the likelihood that butterflies find the house when they need it. Like butterflies, ladybugs also may take shelter in a wooden box designed for them.

West coast lady, Kent Fothergill

Solitary bees and wasps are native insects that provide vital pollinator services in the garden. Some also eat harmful insects, controlling pest populations in your yard. Mason bees are among these non-aggressive beneficial insects. Mason bees do not dig nesting holes or build hives, and so must find existing holes in which to lay eggs. You can provide nesting sites for these often underappreciated insects by drilling smooth holes into the side of a log or a block of wood about one inch apart. Ideal hole size for mason bees is 5/16 inch in diameter with a depth of 6 to 10 inches. Some people recommend lining each hole with a thin cylinder of paper (these can even be purchased commercially for mason bee nesting holes), but don't use plastic straws inside the hole because they prevent air exchange and promote condensation. Mount the nesting block on a pole or the side of a building at least three feet above the ground. If birds or squirrels begin to show interest in the nests, you can place a barrier of chicken wire around the front of the nesting block.

Butterfly house, Susan Ziebarth, IDFG

Other bees and wasps also nest in deep narrow holes. You can experiment with a block of wood containing holes of various sizes, from 1/16 to 3/8 inch in diameter, and observe the most popular sizes. Aphid-eating solitary wasps and "onion bees" will use holes 1/8 to 3/16 inch wide. The wasps pack the holes with aphids prior to laying eggs and so are a boon to rose gardeners who often have problems with aphids.

Reptile and Amphibian Shelters

Toads, frogs, and snakes devour insects and rodents in the garden and yard. Because reptiles and amphibians are "cold-blooded," their body temperature depends on air temperature and they can quickly overheat in the summer. Wood heaps, crude stone walls, and brush piles function as fine shelters for amphibians and reptiles, but you can also make or buy shelters to place in flower beds or vegetable gardens.

Toad houses are quite popular. Western toads are found throughout Idaho and make themselves welcome by eating mass quantities of grasshoppers. An old clay flowerpot six to eight inches in rim diameter can make a charming toad house. Cut or chip a semi-circular piece out of the rim of the pot big enough to allow for a tennis ball. Smooth any sharp edges with sandpaper. You can decorate the pot with latex paint or leave it natural, then set it, open side down, in corner of your yard. Placing a saucer of water near the shelter will increase its appeal to any toads or frogs in the neighborhood.

Rubber boa, IDFG
Coeur d'Alene salamander, IDFG
Western toad, Bruce Haak, IDFG

Attracting Residents Requires Patience

Observing a pair of western bluebirds ferrying nesting materials into a birdhouse you provided for them is thrilling and satisfying. Similarly, seeing acrobatic bats dart to catch night flying insects is a delight. But be patient if your shelters do not gain residents quickly. It is not unusual for a bat house to hang for two years before being discovered! You dramatically increase the likelihood of drawing wildlife by placing dwellings appropriate for animals already living in the vicinity. As your knowledge of the neighboring wildlife grows, so will your success in attracting animals to share your property.

Nuisance Animals

Occasionally, the wildlife visiting your property may become too much of a good thing. Deer may decimate your tomato plants. Gophers may nibble off the roots of your peppers. Your deck may become a shelter for skunks. Even people who generally welcome wildlife may need to discourage certain wildlife to protect valuable plants or safeguard vegetable gardens.

Take steps to remove or exclude animals from your yard only when necessary. Even relocation can cause harm by placing an animal in unfamiliar territory where it must compete with an established population.

Deer

Mule and white-tailed deer, because of their size and numbers, can inflict extensive damage on carefully cultivated vegetation. The most effective method of preventing deer damage is by restricting access, which usually means fencing off those plants needing protection. To effectively guard an entire area, such as a vegetable plot or rose garden, a fence must be eight to ten feet high to keep these animals with a talent for jumping from going right over the top. An electric wire strung several feet in front of a shorter fence also can discourage deer from jumping by delivering a mild shock. You can surround individual shrubs and trees with welded or woven wire fencing. Some fencing material has a green vinyl coating that allows the fence to blend in with vegetation, making it less obtrusive.

If deer are causing damage by rubbing their antlers on tree trunks, plastic tubing slightly larger than the diameter of the trunk can be placed around it. You can protect delicate leaders on small trees by loosely stapling a rectangle cut from stiff paper around the leader.

A thick nylon mesh—the type used to protect fruit trees from birds damage—can be draped over rows of vegetables such as beans, or arranged over tomato and pepper plants supported by cages. This method possesses several disadvantages, however. You must lift and resettle the mesh every few days to prevent plant stems from growing through the mesh where they will be vulnerable to browsing. Frequent checks of the covered plants also ensure that birds trapped under the mesh can be freed. Deer may simply walk over the top of the mesh in an effort to reach the plants, breaking stems and crushing fruit.

Repellents can be effective deer deterrents for short periods of time; however, they are seldom long-term solutions because deer become habituated to them. Some people rotate through a variety of repellent products, which can increase their effectiveness. Many spray-on repellents are available that repel by smelling or tasting bad—the most effective are those that do both, because deer may eat vegetation that smells bad if they are hungry enough. Active ingredients in

many of the repellents include rotten egg whites, garlic, and/or capsaicin (the essence of hot pepper). Repellent sprays must be reapplied every month or so, more often during periods of rain. Spray-on repellents generally are not appropriate for vegetables.

Solid repellents placed in mesh bags and hung on shrubs or small trees can offer some protection for short periods. You can prepare your own solid repellents by adding human hair and pieces of bar soap to a mesh bag. However, deer in more urban areas, which are used to the smell of humans, may not be deterred unless putrid egg whites are added to the mix. Solid repellents can be placed throughout garden areas to protect plants that will be harvested for food.

Alarms are another type of deterrent, which can work with deer and raccoons. Alarms can consist of a loud sound, light, or moving object that startles the animals. The alarm must be unexpected, because deer quickly become accustomed to objects such as scarecrows, fluttering ribbons, aluminum plates, and lights on a regular cycle. Alarms connected to a motion sensor work best. One innovative product combines a motion sensor with a sprinkler. When a deer trips the motion sensor, the sprinkler activates, spraying and startling the animals—while watering your plants at the same time! Of course, this method isn't appropriate when winter temperatures dip below freezing. Noise alarms may not be appropriate if you have close neighbors.

Whatever method of deer-proofing you choose, start early! Protecting your plants (and your financial investment) from browsers must be part of your plan from the beginning.

Bears

Most people know that "a fed bear is a dead bear." This means that if bears get accustomed to human food, or food found near human houses, they usually need to be lethally removed from the area. You can prevent this by cleaning up birdfeeders, apples, and other fruit sources, compost garbage, and pet food if you observe bears in your area. If you live in an area shared with bears, you might consider bird feeding only in the winter, when the birds need it most and when the bears are inactive.

You can make your own deer repellent by mixing 2 tablespoons hot pepper sauce, 1 tablespoon liquid dishwashing soap, and 1 teaspoon garlic powder into a gallon of water.

Raccoons

Raccoons are clever animals. They are nocturnal, feeding mainly at night, and are omnivores, eating a wide variety of plant and animal material, including nuts, fruit, fish, turtles, insects, and eggs. Raccoons often rummage through garbage cans looking for scraps and eat pet food left outside. Therefore, the first steps toward discouraging raccoons are to bring pet food dishes inside at night and keep garbage containers tightly covered.

Bear, ©Robert Volpe

Raccoons can take up residence in a chimney, which you can prevent only by excluding them from entering. A spark arrester or metal mesh placed across the chimney opening will keep raccoons out. If your chimney is already occupied, placing an open container of ammonia in your fireplace should drive out the animals, allowing you to close off entry.

Keeping raccoons away from fruit and out of ponds containing fish or turtles can be difficult. Covering ponds at night will protect the aquatic animals, but may not be practical. You can drape nylon mesh over fruit trees,

shrubs, and vines to prevent raccoon raids. If raccoons are a serious problem they can be live-trapped and moved, however, this is not always the best solution. Relocated raccoons often return to their home territory if moved relatively short distances, they can become other people's problems, or they end up in habitat that is already occupied by other raccoons (only so many animals can live in a given piece of habitat).

Squirrels

Acrobatic squirrels are skilled at overcoming barriers designed to prevent access to birdseed feeders. They can leap several feet horizontally from a tree trunk onto bird feeders hung from a branch. They can shimmy across rope or cable to reach a suspended feeder. Many models of bird feeders are designed to discourage or prevent squirrels from accessing the contents.

Some feeders are equipped with perches attached to a mechanism that allows a lightweight songbird to reach the seed, but closes off the seed access opening when a heavier animal, such as a squirrel, places weight on it. Other feeder types have coated wire mesh encircling the seed reservoir. The mesh openings are large enough to allow passage of small songbirds, but prevent squirrels from reaching the seed. High-tech feeders deliver a mild electric shock to squirrels that contact two separate locations on the feeder, but allow birds to feed unmolested. To discourage squirrels from feasting on seeds in standard feeders, you can mount baffles above hanging feeders or below feeders mounted on a pole. If bird seed is stored outside, make sure to secure it in a metal container to prevent squirrel raids.

Instead of keeping squirrels away from all the feeders, some people set out treats specifically for squirrels. Watching a squirrel hang upside-down to eat dried corn off a cob hung from a tree limb or deck roof can be quite entertaining. Special squirrel feeders with lids or latches force the animals to devise a way of opening them to get at the tasty food inside; peanuts are perfect for feeders of this sort.

Some people believe offering food for squirrels makes them less likely to raid bird feeders. However, others swear that providing a squirrel feeder only increases the number of squirrels visiting the yard and ransacking the bird feeders. You can perform your own experiment to see what works in your yard.

If squirrels continue to be a problem, they can be live-trapped and moved. Relocation of squirrels is a questionable practice because of the stress placed on the transported squirrels, increased competition with local squirrels, potential disease transmission, and moving problem animals to other's property. Squirrel damage in yards, gardens, and orchards is often difficult to control because new squirrels arrive quickly to replace those that are removed. Note that **ONLY** non-native squirrels (eastern fox squirrel and eastern grey squirrel) can be legally trapped and moved; the native red or pine squirrel and the flying squirrel are protected.

Pocket Gophers

Pocket Gophers are burrowing animals that spend most of their lives underground. They are vegetarians and can cause extensive damage in a vegetable

or flower garden by eating entire vegetable plants. A gopher can even kill small trees by eating the roots. Gophers remain active through the winter and store food in their burrows to eat during the cold months. Being relatively solitary animals, usually only one will inhabit an area (unless you have several acres).

Despite these "bad" qualities, gophers may do more good than harm in your yard. They help compost vegetation, aerate the soil, and their burrows provide habitat for other animals. If you only have one gopher, consider letting it stay.

An effective non-lethal method of avoiding gopher damage is to line raised beds with ½ inch wire mesh. Noise devices can be effective in keeping gophers away. Re-location, on the other hand, usually leads to death. Gassing cartridges are available, but use near gardens is not recommended due to the toxic residue left in the soil. Metal gopher snap-traps are usually effective when used as recommended.

Other Mammals

Trees along streams can be protected from beaver damage by surrounding tree trunks with metal fencing or hardware cloth 3½ feet high. Rabbits can be excluded from gardens by fencing them off with a tightly woven fence, 2 to 3 feet high. Alternatively, you can minimize rabbit damage to vegetables by planting a patch of clover or alfalfa in an area of your property away from your garden to lure rabbits away. Skunks may be attracted to pet food left outside or may seek shelter in a close dark space such as the area under a porch or deck. Keeping food indoors at night and blocking access to dark inviting spaces will discourage skunks from hanging out in your yard.

Northern flicker, Justin Barrett, IDFG

Birds

Birds can become unwelcome guests in several ways. A great blue heron may pluck expensive koi out of a meticulously developed backyard pond. A woodpecker hammering on the wooden eve of a house may wake up the household at first light. Pigeons roosting along the gutters can litter a porch or deck with their droppings. Nearly all birds, including woodpeckers, are protected by the federal Migratory Bird Treaty Act and cannot be harmed. However, others (European starlings, English [house] sparrows, and rock doves [pigeons] are not protected and can be removed.

European starling

A wide variety of products are available to discourage birds from roosting in areas where they are not wanted. Wire spikes or coils placed on ledges, gutters, or beams prevent birds from landing. For more delicate roosting spots, such as security cameras or light fixtures, a device with a slender spray of arms thwarts birds from landing.

Skunk Deodorizer for Dogs

1 quart 3% hydrogen peroxide
1/4 cup baking soda
1 teaspoon liquid soap

Gopher snake: slender head, no rattle.

Western rattlesnake: wide head, rattle on tail. Photo by Loren Thomas

Three approaches are available to manage the problem of woodpeckers drilling holes in the wooden siding of your home:

* You can deter birds from landing by stretching netting across the area where they tend to peck.
* Devices available to startle birds include ribbons that hum in a slight breeze when stretched tightly, reflective streamers, and balloons patterned with a large eye to frighten the woodpeckers.
* Holes already bored into the siding can be filled with a nontoxic, quick-setting material that releases an unpleasant smell and taste upon pecking, discouraging further hole making.

All swallows enjoy special protection under the law. You cannot disturb them once they lay eggs. What you can do is remove the abandoned mud nests in the winter and exclude them from returning by angling 3/4"netting across the eaves to prevent access.

Pigeons are common, but not native. These birds, along with starlings (previous page) and house sparrows are not protected under the Migratory Bird Treaty Act.

Rattlesnakes

Western and Prairie Rattlesnakes are the only venomous snakes in Idaho. All other snakes are harmless to humans and pets and should be welcome guests in your yard. You can identify a rattlesnake by its triangular head and distinctive rattle at the end of its tail. However, it is easy to mistake an innocuous gopher snake for a rattlesnake. Gopher snakes possess a skin pattern similar to that of rattlesnakes and when threatened, can coil, hiss, and "buzz" the tip of their tails against the ground, producing a "rattle" sound. The slender head of the gopher snake and the tail that tapers to a thin tip are the keys to distinguishing between the two reptiles.

With caution and awareness, people can co-exist peacefully with rattlesnakes. The snakes are generally reclusive and often are encountered only when disturbed in their hiding spot, such as in a firewood pile or under a porch. However, if your household includes young children or pets that spend a lot of time outdoors, you may want to have a rattlesnake on your property relocated. Call your local Idaho Fish and Game office. Each office has someone trained to capture and relocate rattlesnakes. Rattlesnakes are a protected nongame species in Idaho; do not kill them unless you feel threatend by their presence. They are a necessary component of the ecosystem and, if you take the time to observe them, you may begin to see a certain grace and beauty in their supple movements.

Insects

Of the multitude of insect species inhabiting your yard, only a few are truly pests. Many harmful insects can be kept under control by maintaining a healthy environment. Large insects that commonly attack garden plants – tomato hornworms, potato beetles, cabbage moth caterpillars – can be controlled by picking them off of the plants if your garden plot is not huge. You can set out traps for yellow jackets baited with fruit

Netting under house eaves, Falcon Services, Inc. http://www.falcon services.com

and meat to keep numbers under control. Dormant oil sprayed on fruit trees in the winter is a preventive measure that can smother overwintering insect eggs. However, if you need to deal with a serious insect outbreak, be careful not to destroy the beneficial insects along with the harmful ones. Before you reach for the chemical insecticide, try a natural control method first.

Nurseries often sell insect predators that can control an infestation if released near the pest insects. Ladybugs prey on aphids, while a praying mantis will eat flies, mosquitoes, grasshoppers, and moths. Long-term control of insect pests may be aided by setting out praying mantis egg cases. Recommended coverage to achieve control involves three egg cases for every 5,000 square feet of yard.

For some insects, such as grasshoppers and the caterpillars that attack cabbage, broccoli, and cauliflower plants, products containing a disease organism adapted specifically for the pest insect can reduce their numbers. In the orchard, insects can be controlled by products that disrupt mating or by devices that attract and trap insects.

Natural control products require a bit of patience, because they take time to reduce the population of pest insects. In addition, they do not completely eliminate all of the members of an insect pest population. Instead of eliminating all of the pests, natural controls return the numbers of pest insects back to a more balanced level, allowing them to be kept in check by prey animals.

www.pesticide.org Northwest Coalition for Alternatives to Pesticies is an organization that can help you find natural means of controling pests.

For help with weed identification visit http://www.idaho.edu/weeds/Erickson/Erickson.htm

Idaho Master Gardener http://www.ag.uidaho.edu/mg

Idaho Department of Environmental Quality Waste Disposal Services http://www.deq.state.id.us/waste/index.cfm

Pesticide Use

Areas in ecological balance resist plant and animal pest infestations. However, creating that level of balance in a backyard, or even on a large property, may be difficult. Pest populations from neighboring properties where synthetic chemicals are heavily used may end up causing problems on your property. However, the health of the environment and the plants and animals inhabiting it—including your family—benefit from eliminating or minimizing pesticide use.

If you use a pesticide to manage a problem in your yard, follow these guidelines:

- Positively identify the animal or plant you want to control.
- Look at labels and choose the most specific chemical available. Buy only as much chemical as you need.
- Mix the pesticide as recommended. If you use kitchen utensils such as spoons or measuring cups for mixing the pesticide, do not return them to the kitchen, even after washing.
- Wear protective clothing, such as goggles and gloves, while mixing and applying pesticides. Mix chemicals outside or in an open garage with fresh air ventilation.
- Avoid eating or drinking while mixing or applying pesticides.
- If you are using a pesticide spray, choose a calm day to prevent drift of the chemicals.
- Dispose of any remaining chemicals according to the hazardous waste guidelines in your county. Most counties have hazardous waste disposal locations. *Do not dump chemicals down drains in your house or on neighborhood streets!*

Certifying Your Yard

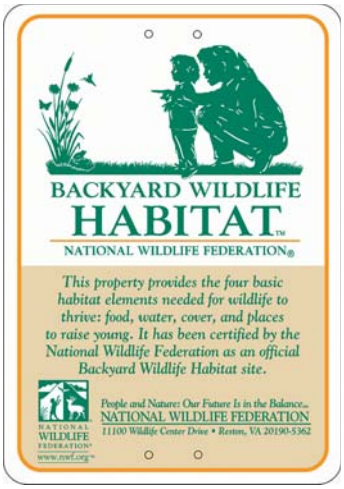
In the process of establishing a wildlife-inviting yard, the National Wildlife Federation (NWF) can offer encouragement, answers to your questions, provide resources for implementation, and link you with a community of like-minded citizens who have certified their yards as Backyard Wildlife Habitats. NWF has been certifying backyard habitats since 1973. More than 60,000 certificates have been awarded throughout the United States and in other countries including Germany, Japan, and Argentina. You can obtain information online at http://www.nwf.org/backyardwildlifehabitat, call 703-438-6100, or write:

National Wildlife Federation
Backyard Wildlife Habitat Information
11100 Wildlife Center Drive
Reston, VA 20190

To certify your property as a backyard wildlife habitat, you answer a series of questions about the plants on your land, water features, shelter opportunities, and the animals that visit your yard. Certification confers privileges such as the ability to display a sign informing your neighbors that your yard is a welcoming place for local wildlife, enrollment into a community of other people aware of wildlife values, and the potential to mentor others (become a "Habitat Steward") in your neighborhood about the benefits and joys of a wildlife-friendly yard. People who certify their yards also receive a lifetime subscription to the newsletter *Habitats* and a one-year membership in the National Wildlife Federation.

http://
www.nwf.org

Posting a sign signifying your yard as a certified wildlife habitat can help initiate a conversation with a neighbor who may question that patch of native grasses you "allow" on your property or who may be uneasy about the hawks who feed on an occasional songbird visiting the birdfeeders. It also offers the opportunity to join with other residents of your town or city to get your municipality recognized as a Community Wildlife Habitat, such as the residents of Hidden Springs, Idaho have done.



If your place of employment includes property that can be modified to attract wildlife, you could lead an effort to get the grounds certified as a Workplace Habitat (such as the James A. McClure Federal Building and United States Courthouse in Boise). Schools also can join in the fun by recruiting children, teachers, and volunteers to develop the property as a Schoolyard Habitat; in the process students learn the benefits of wildlife, gain knowledge about ecology and environmental sciences, and gain confidence with the accomplishment.

No matter what stage of development your personal habitat is in, the National Wildlife Federation offers information, inspirational stories and photos, access to experts who can answer your questions, and even seven online courses in subjects from "Habitat Basics" to "Sustainable Gardening Practices" for which you can receive college credit. In addition, you can share the unique wildlife adventures and wisdom gained from improving the health of your own piece of earth.

Acknowledgements

Writer: Maria Essig
Editor: Sara Focht (IDFG)
Designer: Alyssa Jones (IDFG)
Reviewers: Beth Waterbury (IDFG), Susan Ziebarth (IDFG), Diane Evans-Mack(IDFG), Trish Heekin (LSWCD) Lauri Hanauska-Brown (IDFG), Susie Headlee (Habitat Steward, NWF), Chuck Harris (IDFG)
Photos: Thank you to all who generously donated photos for this publication. Any photo without a credit was purchased on istockphotos.com.
GIS map: Idaho Fish and Wildlife Information System
Questions, comments, corrections:
Nongame, Endangered and Watchable Wildlife Program
P.O. Box 25
Boise, ID 83707
info@idfg.idaho.gov
(208)334-2920

Idaho Fish and Game Regional Offices

Panhandle Region
2750 Kathleen Ave.
Coeur d'Alene, ID 83815
(208) 769-1414

Clearwater Region
3316 16th St.
Lewiston, ID 83501
(208) 799-5010

Southwest Region
3101 S. Powerline Rd.
Nampa, ID 83688
(208) 564-8465

Magic Valley Region
319 S. 417 E.
Jerome, ID 83338
(208) 324-4359

Southeast Region
1345 Barton Rd.
Pocatello, ID 83204-1819
(208) 232-4703

Upper Snake Region
4279 Commerce Circle
Idaho Falls, ID 83401
(208) 525-7290

Salmon Region
P.O. Box 1336
99 Hwy 93 N.
Salmon, ID 83467
(208) 756-2271

Headquarters
600 S. Walnut
P.O. Box 25
Boise, ID 83707
(208) 334-2920

Yellow-headed blackbird, Kent Fothergill

http://fishandgame.idaho.gov/

Idaho Native Plants

Common Name	Scientific Name	Notes
Conifers		
Western Red Cedar	Thuja plicata	Not good in Snake River Plain-good in NI
Lodgepole Pine	Pinus contorta	Cover and seeds-CI in high elevations-NI low elelvations
Ponderosa Pine	Pinus ponderosa	Native to CI and NI-dry sites-cover, seed, snags
Utah Juniper	Juniperus osteosperma	food and shelter-SI
Rocky Mountain Juniper	Juniperus scopularum	food and shelter-SI
Douglas-fir	Pseudotsuga menziesii	grows tall-dry tollerant-seeds, snag, coverCI, NI
Engelman Spruce	Picea engelmannii	Cover-needs moist site-CI, NI
White Fir	Abies concolor	
Deciduous Trees		
Quaking Aspen	Populus tremuloides	Food and shelter
Cottonwood	Populus deltoides	Gets big
Hackberry	Celtis reticulata	Berries
Sandbar or Coyote Willow	Salix exigua	Likes water
Water Birch	Betula occidentalis	Catkins are attractive for finches
Thin-leaf or Sitka Alder	Alnus sinuata	Catkins are attractive for finches
Mountain Mahagony	Cercocarpus ledifolius	Beautiful plant, thermal cover
Rocky Mountain Ash	Sorbus scopulina	berries for birds-CI, NI
Red-osier Dogwood	Cornus sericea	Distinctive red bark-CI, NI
Shrubs		
Skunkbush Sumac	Rhus trilobata	Towhees love this plant-SI
Bitterbrush	Purshia tridentata	Flowers/insects/food-SI
Big Sage	Artemesia tridentata	Sparrows love the cover and seeds
Rabbitbrush	Chrysothamnus nauseous	Excellent fall color and nectar-CI, SI
Chokecherry	Prunus virginianus	Spring flowers/fall berries/insects
Blue Elderberry	Sambucus cerula	Spring flowers/fall berries
Red Elderberry	Sambucus racemosa	Spring flowers/fall berries
Rocky Mountain Maple	Acer glabrum	Cover
Red Twig Dogwood	Cornus stolonifera	Spring flowers/fall berries
Buckbrush (shiny-leaf ceanothus)	Ceanothus velutinus	Cover
Kinnikinik	Arcostaphylos uva-ursi	One of the finest ground covers known
Thimble Berry	Rubus parviflorus	Cover/great berries-cool moist sites
Huckleberry	Vaccinium globulare	Cover/great berries
Golden Current	Ribes aureum	Cover/great berries
Bittercherry	Prunus emarginata	Dry tolerant-berries for birds
Syringa	Philadelphus lewisii	Perfumed white flowers-Idaho State flower
Oregon Grape	Berberis repens, mahonia repens	Northern Idaho-grows near ground
Douglas Hawthorn	Crataegus douglasii	
Mallow Ninebark	Physiocarpus malvaceus	CI, NI
Creeping Barberry	Mohonia repens	Ground cover-evergreen-CI, NI
Douglas's Spirea	douglasii	pink flower clusters, cover, insects-CI, NI

NI-North Idaho
CI-Central Idaho
SI-South Idaho

Susie Headlee,
Hidden Springs, Idaho

Native Idaho Plants

Common Name	Scientific Name	Notes
Flowers		
Rocky Mountain Penstemon	Penstemon strictus	Nectar/insects
Orange Sneezeweed	Helenium hoopesii	Nectar/seeds
Annual Sunflower	Helianthus annuus	Nectar/seeds-CI, NI
Little Sunflower	Helianthella uniflora	good for game birds
Rocky Mountain Beeplant	Cleome serrulata	Nectar/insects-NI, CI
Silver Lupine	Lupinus argenteus	Nectar/insects
Silky Lupine	Lupinus sericeus	
Bigleaf Lupine	Lupinus sericeus	All of Idaho, moist meadows
Red Columbine	Aquilegia formosa	Nectar/insects-wooded setting
Firecracker Penstemon	Penstemon eatonii	
Tapertip Penstemon	Penstemon attenuatus	
Clearwater Penstemon	Penstemon venustus	Nectar/insects-CI, SI
Rocky Mountain Iris	Iris missourensis	purple-white flowers-needs wet spring
Common Camas	Camassia quamash	purple to white flowers-needs wet spring
Wild Blue Flax	Linum perenne lewisii	seeds, nectar
Scarlet Gilia	Ipomopsis aggregata	nectar/hummingbirds-all Idaho
Tall or Slender Cinquefoil	Potentilla gracilis	seeds, nectar
Western Aster	Aster occidentalis	seeds, insects-late season purple bloom
Wyeth s Buckwheat	Eriogonum heracleoides	seeds, attractive ground cover-butterflies-CI, NI
Ferns		
Lady fern	Athyrium filix-femina	tall-needs a lot of water
Sword fern	Polystichum muitum	Northern Idaho-fairly drought resistant
Grasses		
Indian Rice Grass	Achnatherum hymenoides	
Great Basin Wild Rye	Leymus cincereus	seeds-SI on dry sites-CI, NI moist sites
Idaho Fescue	Festuca idahoensis	Seeds-Palouse
Needle and Thread	Stipa comata	Seeds-Palouse
Bluebunch Wheatgrass	Agropyron spicatum	Native to Palouse
Prairie Junegrass	Koeleria cristata	seeds-shiny golden appearance

Table credits: Chuck Harris, Sara Focht, Trish Herkin, Kent Fothergill

Yellow warbler, by Charles Harris, IDFG

Idaho Fish and Game adheres to all applicable state and federal laws and regulations related to discrimination on the basis of race, color, national origin, age, gender, disability or veteran's status. If you feel you have been discriminated against in any program, activity, or facility of Idaho Fish and Game, or if you desire further information, please write to: Idaho Department of Fish and Game, P.O. Box 25, Boise, ID 83707 OR U.S. Fish and Wildlife Service, Division of Federal Assistance, Mailstop: MBSP-4020, 4401 N. Fairfax Drive, Arlington, VA 22203 Telephone: (703) 358-2156.