



Welcoming Wildlife

TO THE GARDEN

*Creating Backyard & Balcony
Habitats for Wildlife*



*Includes 44 ecologically-sound projects for housing
and feeding birds, bees, butterflies and more.*

CATHERINE J. JOHNSON

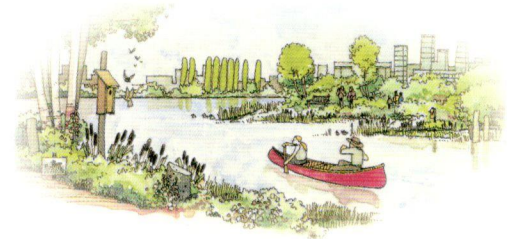


SUSAN McDIARMID



EDWARD R. TURNER

Our Connection with the Natural World



PEOPLE EVERYWHERE are discovering the joys of inviting the natural world back into their surroundings. Wild creatures can be enticed to spaces as small as balconies and ledges, so that anyone, anywhere, from the busiest of cities to the quietest of acreages, can watch wildlife through their windows. In nature, people regain a sense of awe, and a feeling of interconnectedness with the creatures who share our world. We marvel at a pair of nesting robins that dive-bomb passersby to protect their young, and are amazed by the coordinated efforts of an ant colony transporting food particles larger than themselves. Observing nature enables us to see beyond our own lives.

For most people, providing food, water, and shelter for wildlife is satisfying. To ease lives and help restore habitat, and in doing so, perhaps aid in the increase of declining species, gives us a feeling of

worth. Even animals we may not often see, such as towhees scuffling beneath low shrubs or the owl whose pellet we find in the morning, add to our sense of purpose. Being close to wildlife is a thrill. It's a personal experience each of us can discover.

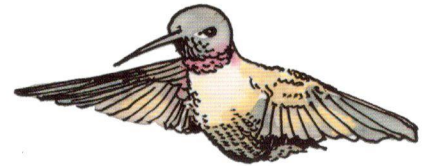
With careful planning it is possible to transform entire neighborhoods, one yard at a time, into swaths of inviting pathways for wild creatures, and the welcome can extend into existing areas such as parks and wildlife sanctuaries. Our commitment to wildlife can even grow to influence the way we exercise our political will and economic activity. It all stems from the plants we choose and the insects, birds, and mammals we attract to our own small at-home habitats. The increased understanding that people gain from creating a garden or planter for butterflies, or from landscaping a yard to at-



Downy woodpecker and chestnut-backed chickadee feed on suet.

tract and feed migrating birds, is part of the hope we have for a world in which all creatures, including humans, can live and thrive together. We can remain a part of the natural world and help renew the earth, and can do it in our own backyards, making them into places where wild things flourish.

Hummingbirds



HUMMERS, as they are affectionately called, deserve a section of their own. The smallest of all birds, hummers alone are able to hover as well as fly backwards, sideways, and forward. They have the fastest heartbeat of any bird and some of the most colorful plumage. Their nests are tiny cups fashioned from plant matter and spiderweb silk, with eggs no bigger than peas. In climates that are warm year-round, they may even raise three broods in a season. Hummingbirds have tremendous nutritional requirements and can be easily enticed to our backyards and balconies if we offer what they need.

You can provide a haven for hummers for the duration of their stay. In cooler climates, spring arrival of hummingbirds coincides with the blooming of wildflowers and blossoming shrubs. This is a good time to put your feeders out. Hummers can benefit by the extra nectar until there is an abundance of flowers, and after that,

feeders are still used with great frequency. Use a combination of feeders and flowers to create the ideal habitat (see the following section on hummingbird gardens). Hummingbirds must feed approximately every 10 to 15 minutes, consuming twice their weight in nectar each day. Most of their food should come from natural sources but they will also benefit from the sugar-water solution in feeders.

The guidelines that apply to all bird feeding are even more important with hummingbirds. Consistency is essential. Once hummers are accustomed to your source of food, you have a responsibility to keep feeding them, especially during winter months. If you go on holiday, arrange for a neighbor to fill your feeder (making sure that the neighbor knows how to make the nectar solution and will be diligent about cleaning the feeder). Make sure the feeder is only filled with a nectar solution of one part sugar to four

Xantus's Hummingbird

Gerry and Lloyd Patterson, two birders on the coast of British Columbia, Canada, were host to a Xantus's hummingbird, a non-migratory resident of southern Baja in Mexico. If not strange enough (a first for Canada!), it was winter when the bird arrived in the Pattersons' yard. The couple's daughter noticed it feeding from a scented pink geranium in the window box, then from the winter jasmine and hardy fuchsia. When the North American field guides didn't reveal any bird that resembled the visitor, several local birders were notified and came for a look. They in turn called bird experts from elsewhere in the province. The ID confirmed, the Rare Bird Alert phone line was contacted, and birders began to "flock" in.

Gerry and Lloyd hung out feeders to entice the bird to stay – and so it did, from mid-December 1999 until April 2000. The exotic, black-cheeked hummer attracted a crowd of nearly 1400 out-of-town birders and several hundred locals. "It's like winning the World Series," and "Absolutely astonishing; how did this happen?" were comments made by excited birders who came from as far away as Nova Scotia and Kentucky. How it happened may never be discovered with any certainty. Speculation includes being blown off course in an El Niño-generated hurricane, illegal importation, escape from a collector, or "hitchhiking" aboard a ship.

The Pattersons spoke to nearly everyone that came through their yard and were impressed by the sharing of binoculars and telescopes between strangers. Lloyd said, "It was a fun winter. Everyone was friendly." Some visitors brought gifts, such as sugar and books, and the couple was pleased that over the four-month period, the only adverse signs of the throngs were one cigarette butt and a candy wrapper. Celebrity status surprised the Pattersons, who did interviews for newspapers, two radio and three TV stations. Lloyd Patterson sums up the busy bird months with a laugh and says, "I learned to get dressed before I opened the drapes in the morning."

Vines

- Bean, Scarlet Runner (*Phaseolus coccineus*)
- Bougainvillea (*Bougainvillea* sp.)
- Butterfly Bush (*Buddleia davidii*)
- Butterfly Bush, Fountain (*Buddleia alternifolia*)
- Cape Honeysuckle (*Tecomaria capensis*)
- Clematis (*Clematis* sp.)
- Cross Vine/Trumpet Flower (*Bignonia capreolata*)
- Cypress Vine/Morning Glory (*Ipomoea quamoclit*)
- Honeysuckle, Coral (*Lonicera heckrottii*)
- Honeysuckle, Trumpet (*Lonicera sempervirens*)
- Jasmine (*Jasminum* sp.)
- Trumpet Creeper (*Campsis radicans*)



Good color and shape for hummers.

Butterflies and Moths



THE POET ROBERT FROST was so enchanted by these stunning insects that he was moved to poetry. The sight of butterflies in our garden can be an inspiration to us as well, but rather than creat-

ing verse, we can be moved to create a hospitable environment. To attract butterflies and moths, you must provide for all the stages of their life cycles with specific habitat requirements. Nectar plants and sunny, sheltered spots in the garden will attract the adult insects. The right choice of host plants will provide egg-laying locations and larval habitat that

supplies food for caterpillars. Areas of dense vegetation, leaf litter, unmowed grass, and ground debris will camouflage pupae.

Butterflies and moths are the only two members of the Order Lepidoptera and they can be difficult to tell apart. Moth behavior often mimics that of butterflies which complicates identification and, at a glance, some moths even resemble birds. Butterflies and moths are the only insects with tiny scales on their wings. Butterflies at rest usually keep their wings together and pointed straight out from their backs while moths spread their wings or hold them close to their bodies when motionless. Butterflies have simple knobby antennae, while those of moths are generally plumed, or feathered. Butterflies are seen during the day, but most moths are nocturnal. In North America there are between 8,000 and 10,500 moth species and only about 725 butterfly



Zebra swallowtail.



Butterfly garden with sign.

species, so moths are likely to be more populous in your garden, just not as readily seen.

Butterflies and moths are best provided for with a carefully planned garden. Butterflies are attracted to more than just sweet-smelling, colorful flowers and leaves, however. Piles of rotting fruit, particularly grapes, are an “intoxicating treat.” Urine and feces in small puddles also have their appeal, but such things may be more appropriate in a barnyard than a backyard. Both butterflies and moths need a moist, sandy spot for drinking and absorbing minerals—this is referred to as “mud-puddling,” or “puddling,” and in areas where damp spots are rare, large numbers of butterflies will congregate in colorful patches on the ground. If it isn’t safe for butterflies down low in your yard, water a small patch of

earth elevated on a stump, or use a pedestal birdbath.

Provide stones in sunny spots for butterfly basking; being cold-blooded, they need warmth to become mobile. You may even see butterflies lie on their sides to expose a large surface area to the sun in order to remain active throughout the day.

Moths are drawn to light at night. Keep screens and doors closed to avoid attracting them inside. At the same time, you can take advantage of their nearness, and identify individual species. Up close, you’ll be able to enjoy the variations of wing shapes and patterns. Moths are partial to sugary concoctions so use your imagination to lure them with sweet mixtures.

You may want to experiment with a butterfly house. According to reports, no

Bugs and Burrowers



BESIDES THE FAMILIAR butterflies and moths, a backyard wildlife habitat will be graced with many other tiny and fascinating creatures. Earthworms and slugs, bugs of all sorts, including the insects and spiders, abound in a successful habitat. The term “bug” is used here collectively as a matter of simplification and is not to be confused with the “true bugs” as listed below. There are good field guides available that can help you with scientific details should you wish to study any of these creatures in depth.

Bugs are the backbone of ecology and many are directly beneficial to humans—they pollinate flowers and thereby enhance crop yields, they decompose organic matter, fertilize and build soil, eat weeds and other bugs, and provide food for birds and mammals. Some are responsible for commercially valuable products such as honey, beeswax, and silk. Most bugs are harmless to humans,

but you may want to consult local identification guides or your natural history society for the types of bugs in your area. Most insect pests are just a nuisance, but approximately one percent of them cause major damage to crops and gardens. The irony is that the more pesticides used, the worse the insect infestations can become with the pests’ natural predators being killed as well.

Bugwatching is becoming popular in its own right, just as birdwatching already is. A bugwatcher will see tiny creatures doing amazing things such as building intricate webs that stretch across roads, or doing the backstroke around a pond, even hiding deep inside a flower to ambush prey. With a change of perspective, the wildlife steward can come to appreciate the role that bugs play in the backyard habitat and acknowledge that even the worst pests have a place in the natural order of things.





Eight-spotted skimmer.

The most important requirement for bugs as well as other wild guests is a pesticide-free environment. A beautifully planted backyard filled with perfect foliage will be a wildlife graveyard if you achieve it by using toxic pesticides and herbicides. When undesirables such as aphids show up, keep in mind that bugs are the beginning of the food chain in any wildlife habitat and most will be eaten by more desirable guests, like birds and ladybugs. Other habitat requirements for most bugs are a source of water, native plants, leaf litter, grass and ground debris, and a woodpile.

There are nearly 100,000 species of insects in North America and about 3,000 spider species, with even more spiders that have not yet been identified. Spiders are non-insects, as are ticks, mites, scorpions, centipedes, and millipedes. The most recognizable differences between insects and spiders are:

Insects	Spiders
6 legs	8 legs
2 antennae	0 antennae
3 major body sections	2 major body sections

Both insects and spiders are invertebrate animals with hard outer coverings (exoskeletons), and are the most numerous creatures on earth, accounting for over three-quarters of all animals.

Dragonflies and Damselflies

Dragonflies and damselflies are great favorites of naturalists and wildlife stewards. If you are fortunate enough to have a pond or bog, or live near a body of slow-moving water such as a stream, you may attract these flying predators. Growing numbers of people like to watch them just as birders watch birds. And the names are alluring—Vivid Dancer, River Cruiser, Cherry-faced Meadowhawk, and Blue Dasher are just a sampling.

Dragonflies have outstanding flying capabilities. A

Dragonfly

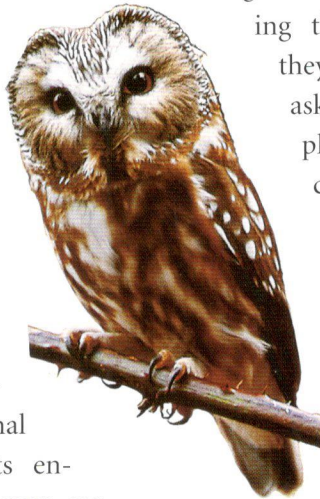
Dragonflies patrol for prey near the tiny backyard of one naturalist in a mobile home park, but she had never seen any of the insects around her miniature bog or pond. One hot afternoon, she sat next to the cattails, enjoying the stillness. The woman watched in amazement as a female Paddle-tailed Darner landed on the stem of a cattail, clasped the soft plant tissue, and dipped the tip of her abdomen again and again – the knifelike ovipositor laying each egg precisely into the cattail stem. The greenish-yellow darner, oblivious to its audience, continued her mission amongst the cattails, even as the naturalist stood and walked inside for her camera.

She photographed the dragonfly from less than a foot away with a macro-lens, and continued to observe the insect for the twenty minutes it took to finish its egg-laying. Something to puzzle over: how would the gilled dragonfly nymphs, after hatching, get from the bog to the pond to live out their larval stage? One day she may see it for herself.

Cats

Cats are responsible for the deaths of hundreds of millions of wild birds and animals each year. Your friendly neighborhood feline presents as big a danger to migrating songbirds as do pollution, cars, poison, and even loss of habitat. If you want to create a backyard that will attract wild creatures, it should be cat-free. Cats cannot be trained to *not* hunt, and even declawing them does not stop their lethal effectiveness.

The best way to prevent your cat from preying on wildlife is to keep the animal inside. If you are the owner of an outdoor cat, you may be surprised to learn that your cat can be kept indoors with no harmful effects. In fact, indoor cats actually live much longer than outdoor cats. They don't face the same dangers from traffic, predators, and other potentially lethal situations that outside cats encounter regularly. Cats may even contract salmonella from ingesting birds with the illness. Pine siskins are particularly susceptible to this bacterial infection that may be transmitted between the birds at inadequately cleaned bird feeding stations. Cats go missing with alarming frequency in urban areas—ask one of the many cat owners who has lost a cat and never found out what happened to it. If you keep your cat inside you will have peace of mind. If you want to help your outdoor cat make the adjustment to be-



Northern saw-whet owl.

ing indoors, consider building it an enclosure where it can bask in the sun and access the house. It is also possible, if somewhat unusual looking, to take your cat for walks outside using a lead and harness.

If your yard is frequented by a neighbor's cat, talk to your neighbors about the wildlife garden you are trying to create, and explain that cats put your wild guests in danger. Try to sell neighbors on the idea of keeping their cat inside. If they're not interested, ask them to put multiple bells around the cat's collar. A cat can learn to keep one bell quiet, but two or more is difficult. Bells are not very effective deterrents, however, and will not prevent young birds and other wildlife from being killed.

Cats are not natural to the North American ecosystem, regardless of what some people believe. Your neighbors may argue that cats are natural predators and that they help to check the pest population by keeping mice and rats under control. Unfortunately, this is not really true. Cats are housed and fed by humans.

Douglas Squirrel Family

Pulling weeds from the tulip bed one spring, a wildlife gardener heard the loud trill of a scolding squirrel inside the nearby shed. She looked up and there it was, staring at her through the window, tail vibrating. Later, she sneaked quietly into the shed and stood still until she heard some rustling. There along the top of the wall, a little head popped up, then another, and another, until three young squirrels were all chirping down at her.

The next day the woman went to the shed and watched as three fuzzy rumps disappeared behind the wall. Daily she visited her resident squirrels and they became braver, staying out longer in the open, ignoring her. In the days that followed, she watched the three chase each other through plastic pipe on the floor, then saw them run in figure-eights along the spare lawnmower belts. Close encounters with young wildlife in an everyday place – her usually quiet shed a playground.

Deciduous Trees

Alder, Arizona (*Alnus oblongifolia*)
Alder, Red (*Alnus rubra*)
Alder, Sitka (*Alnus sinuata*)
Alder, Thinleaf (*Alnus tenuifolia*)
Alder, White (*Alnus rhombifolia*)
Apple, Common (*Malus pumila*)
Ash, Black (*Fraxinus nigra*)
Ash, Green (*Fraxinus pennsylvanica*)
Ash, Oregon (*Fraxinus oregona*)
Ash, White (*Fraxinus americana*)
Aspen, Bigtooth (*Populus grandidentata*)
Aspen, Quaking (*Populus tremuloides*)
Beech, American (*Fagus grandifolia*)
Birch, Gray (*Betula populifolia*)
Birch, Paper (*Betula papyrifera*)
Birch, Sweet (*Betula lenta*)
Birch, Water (*Betula occidentalis*)
Birch, Yellow (*Betula alleghaniensis*)
Black Tupelo (*Nyssa sylvatica*)
Buckthorn, Carolina (*Rhamnus carolinianus*)
Buckthorn, Cascara (*Rhamnus purshiana*)
Butternut (*Juglans cinerea*)
Buttonbush, Common (*Cephalanthus occidentalis*)
Cherry, Bitter (*Prunus emarginata*)
Cherry, Black (*Prunus serotina*)
Cherry, Pin (*Prunus pensylvanica*)
Chokecherry, Common (*Prunus virginiana*)
Cottonwood, Black (*Populus trichocarpa*)
Cottonwood, Eastern (*Populus deltoides*)
Cottonwood, Fremont (*Populus fremontii*)
Cottonwood, Narrowleaf (*Populus angustifolia*)
Crabapple, Flowering (*Malus sp.*)

Migration Fly-way

Ever wonder what living on a migration fly-way might be like? Aurora Paterson, an RN from Scotland, found out when she moved to Tofino on the west coast of Vancouver Island, British Columbia. She went from being an average to a very knowledgeable birder, thanks to a stream of vagrant and transient species that kept "dropping in." Paterson's first exotic sighting was of a Laysan albatross – exotic not because it originated from another country, but because it lives its life exclusively in the open ocean. The Laysan was also rare along that particular stretch of the ocean, seen more commonly off of California and Alaska.

Paterson had a tropical kingbird use the power line in her yard as a hunting perch for two weeks. She also watched a rustic bunting, a Eurasian species, with two hundred and eleven other birders who visited her yard. She was also host to an oriental turtle-dove that was later officially classified as a vagrant for continental North America.

Paterson's feeders have been stop-overs for many first and second species sightings to her West Coast location. Included are a common redpoll, black-headed grosbeak, common grackle, western bluebird, white-throated sparrow and a bluejay. As a result of Paterson's occupation, she has ended up tending sick, injured, and orphaned wildlife that people bring to her and now operates "Rory's Refuge," a volunteer wildlife rehabilitation center specializing in birds.

Welcoming Wildlife

TO THE GARDEN

Creating Backyard & Balcony Habitats for Wildlife

Make your backyard, balcony or rooftop an oasis for wild creatures. *Welcoming Wildlife* shows you how to create habitats and safe housing for birds, mammals, reptiles and helpful insects, and reveals the fascinating world of backyard ecology.

Welcoming Wildlife to the Garden includes hundreds of photos and illustrations and 44 wildlife-friendly projects, such as:

- ✂ Bluebird Houses
- ✂ Barn Owl Nest Box
- ✂ Hummingbird Feeder
- ✂ Butterfly Ledge
- ✂ Bee Houses
- ✂ Container Gardener's Worm Box
- ✂ Bat Nursery
- ✂ Birdbaths
- ✂ Ponds

Welcoming Wildlife provides a wealth of practical gardening and food cultivation suggestions for container gardens and backyards. Learn how to discourage unwelcome guests and help native species thrive in our shared environment. In addition, find out about many rewarding nature activities for individuals and the community. Any space, small or large, urban or rural, can become a wildlife haven.

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"*Welcoming Wildlife to the Garden* is informative, comprehensive and scientifically accurate, never stooping to dogma or rhetoric, with first-rate photographs and illustrations.

This is an excellent primer and a welcome addition to any gardener's bookshelf."

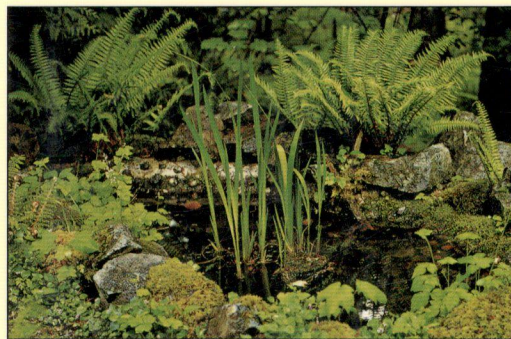
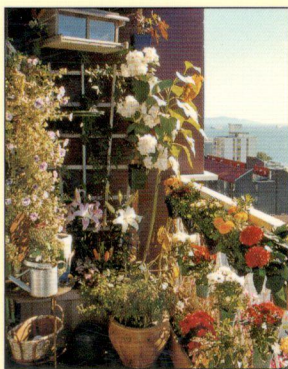
Douglas Justice, Associate Director and Curator of Collections,
UBC Botanical Garden & Centre for Plant Research

"This is a highly practical and comprehensive guide for gardeners (beginners and experts alike) who want to establish more natural, native ecosystems on their properties. It also provides readable, ecologically sound rationale for doing so."

John Field, PhD in Zoology, Instructor

"... a delightful and helpful addition to the libraries of gardeners and others interested in caring for the natural world. Readers will discover the joys of observing nature at their doorstep while making the important contribution of caring for biodiversity at home."

Sylvia D. Pincott, award-winning naturalist, Backyard Habitat Columnist,
Naturalist Advisor for *Naturescape*



Hartley & Marks
P U B L I S H E R S