



Among the fondest and most memorable moments of childhood are the discoveries of songbirds nesting in the backyard. The distinctive, mud-lined nests of robins and their beautiful blue eggs captivate people of all ages. Likewise, the nesting activities of house wrens, cardinals, chickadees, and other common birds can stimulate a lifelong interest in nature. The Backyard Birding For Everyone Guide provides you with the information you need to start a fascinating new hobby that will provides hours of joy for you and your family.

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Common Birds Of North America



An Illustrated Guide To 50 Of The
Most Common North American Birds

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Baltimore Oriole (*Icterus galbula*)

Look for this bird in groves and shade trees in residential areas of towns and suburbs. Smaller than a robin, the male's fiery orange and black is easy to spot. As he wings by, his bright colors add a flick of glory to the urban scene.

The song is a rich series of whistled notes. Wintering to South America, the oriole's summer breeding range stretches from Nova Scotia to north Texas. This is the architect of the graceful pendant nests usually seen only after the leaves have fallen, and the birds have gone.



Barn Swallow (*Hirundo rustica*)

Length about 7 inches; distinguished among our swallows by deeply forked tail. While they breed throughout the United States, they winter to South America.

This is one of the most familiar farm birds and a great insect destroyer, seeking prey from daylight to dark on tireless wings. Its favorite nesting site was barn rafters, upon which it stuck mud baskets to hold its eggs. But modern barns are fewer and so tightly constructed that swallows cannot gain entrance, and in much of this country, they have turned to boat docks, commercial buildings, summer homes, and the out buildings of rural suburbs to keep the species going. Like other rural birds, they have to adjust to changing land-use patterns.



Chickadee (Parus sp.)

Length about 5 inches. Resident in most of North America.

Because of its delightful notes, its flitting ways, and its fearlessness, the chickadee is one of our best known birds. It responds to human encouragement, and by hanging a constant supply of suet, this black-capped visitor can be made a regular feeder in suburban gardens or city yards. Though small in size, these cousins of the titmice are highly useful against insects, gleaned mostly from the twigs and branches of trees. The chickadee's food is made up of insects and seeds, largely seeds of pines, with a few of the poison ivy, some weeds, and sunflowers.



Bluebird (*Sialia* sp.)

About 6 inches long, bluebirds breed in the United States, southern Canada, Mexico, and Guatemala, wintering in the southern half of the Eastern United States and south to Guatemala.

The bluebird was once a familiar tenant of towns, hailed as the herald of a new vernal season, and decidedly domestic in its habits. About the time that starlings became so very numerous, it declined in numbers. No one is sure why its numbers fell, but competition for nest sites by starlings and house sparrows is certainly partly responsible. Recently, it has begun to reappear in many places.

Its favorite nesting sites are natural cavities in old trees, boxes made for its use or crannies in buildings. Nesting boxes may be restoring the species, whose occupants pay rent by destroying insects. The bluebird's diet consists of 68 percent insects and 32 percent vegetable matter. The commonest items of insect food are grasshoppers first and beetles next, while caterpillars stand third. Small flocks sometime invade yards for the red fruits of flowering dogwood trees.



Blue Jay (*Cyanocitta cristata*)

You either admire or hate this arrogant, foot-long hustler, easily identified by its brilliant colors. The blue jay is resident in the eastern United States and southern Canada, west into the Dakotas, Colorado, and Texas.

Like most insolent creatures, this jay has a dual nature. Cautious and silent in the vicinity of its nest, it is bold and noisy away from it. Sly in the commission of mischief, it is ever ready to scream "thief" at anything poaching on its domain. As usual in such cases, its epithet is applicable to none more than itself as neighboring nest holders know to their sorrow; for during the breeding season the jay lays heavy toll upon the eggs and young of other birds. But with all its sins of pride and lust, back yards are enlivened by the presence of blue jays.



Bobwhite (*Colinus virginianus*)

This quail, about 10 inches long, is known by the clear call that suggests its name. It is native in the United States east of the Rockies and has been introduced many places in the West.

The bobwhite, and its call, is loved by every countryside visitor. It is one of the most popular game birds and appreciated as a gourmet's delight. Quail have moved into our suburbs, although its numbers have diminished in many States through loss of habitat. About half the food of bobwhites consists of weed seeds, a tenth of wild fruits, and a fourth grain. Most of the grain it consumes is picked up from stubble. Fifteen percent of the bobwhite's food is composed of insects, including several of the most serious pests, but its greatest value is aesthetic.



Brown Creeper (*Certhia familiaris*)

Length 5 inches. Breeds from Alaska and Canada south to the Great Lakes States and Connecticut; also in the mountains south to Nicaragua; winters over most of its range.

Rarely indeed is the creeper seen at rest. It appears to spend its life in an incessant scramble over the trunks and branches of trees, gleaning its insect food. It is so protectively colored as to be practically invisible to its enemies and, though delicately built, possesses strong feet and claws. Its tiny eyes are sharp enough to detect insects so small that most other species pass them by. The creeper fills a unique place in the ranks of our insect destroyers: minute insects, their eggs and larvae, moths, caterpillars, small wasps, scales, and plant lice are items of its diet.

It does not appear in flocks. Single birds or pairs will feed infrequently on beef suet at bird stations, but it is seldom a regular visitor.

Brown Thrasher (*Toxostoma rufum*)

About 11 inches. Breeds from the Gulf to southern Canada and west to Colorado, Wyoming, and Montana; winters in the southern half of the eastern United States.

The brown thrasher is more retiring than either the mockingbird or catbird, but, like them, is a splendid singer. Not frequently, indeed, its song is taken for that of its more famed cousin, the mockingbird. It is partial to thickets and gets much of its food from the ground. Its search for this is usually accompanied by much scratching and scattering of leaves; whence its common name. Its call note is a sharp sound like the smacking of lips, useful in identifying this long-tailed, thicket-haunting bird, which does not relish close scrutiny. The brown thrasher is not so fond of wild fruit as the catbird and mocker, but devours a much larger percentage of animal food.



Canada Goose (*Branta canadensis*)

This more familiar and most common of the wild geese is best known in urban areas as a visitor in spring and fall.

Sizes vary, but the head and neck markings make this goose easily identifiable. The Canadas breed on lake shores and coastal marshes, primarily in Canada, and migrate in organized units utilizing the well known V-formation, although sometimes flying in long strings of birds. Flying by day and night, Canadas have set down in flocks on city squares, apparently mistaking a pool of light for a water surface. They seldom live in cities or towns, although visiting urban parks on occasions. Their honking cries in migration have stirred the blood of many an urbanite on a fall night when traffic noises let the wild cry from the skies leak through.



Cardinal (*Richmondena cardinalis*)

Color alone would make cardinals favored birds. Their striking plumage is easily seen and long remembered. Though mild mannered, they will sometimes chase each other from a feeding station in early winter, but by late winter and spring, they eat side by side.

Preferring vines, shrubbery, and thickets, they will live comfortably in city yards and parks. Since cardinals do not migrate, they will remain in one yard the year round, as long as food is available. Often nesting in bushes beside busy sidewalks, or near enough to homes that their every move can be watched, they often have several broods a year.

Their usual song is a clear and ringing whistle. While no two birds seem identical in sound, their songs are distinctive, and once learned, will always bring pleasure.

These fine birds are now found in most states, and range north as far as southern Canada.



Catbird (*Dumetella carolinensis*)

Length about 9 inches; the slaty gray plumage and black cap and tail are distinctive. Breeds throughout the United States west to New Mexico, Utah, Oregon, and Washington, and in southern Canada; winters from the Gulf States to Panama.

In some localities the catbird is fairly common. Tangled growths are its favorite nesting places and retreats, and ornamental shrubbery around houses will attract and keep them inside a town. The bird has a fine song, frequently broken by mewing like a cat. Its habits are somewhat similar to those of its cousin, the mockingbird, with song almost as varied, but it is more secretive and usually sings while hidden in the bushes. It feeds on fruit and insects, and can be lured to shelves and windows by raisins, cherries, or chopped apples.



Cedar Waxwing (*Bombycilla cedrorum*)

Found in open or bushy woodlands or along the margins of agricultural and residential areas, this sleek, crested brown bird is between the size of a sparrow and a robin. The broad yellow band at the tip of the tail is conspicuous and its voice is a high, thin lisp or zeee. It is the only sleek brown bird with a long crest.

Breeding from Canada to north Georgia and west Kansas, its nests can be fairly common in suburban areas, and it winters in irregular patterns throughout the United States.



Chimney Swift (*Chaetura pelagica*)

It's hard to figure out how these birds ever existed without urban areas, since they literally earn their first name by nesting and roosting in chimneys, propping themselves against the inside surface with short, spiny tails.

This swift is normally found only east of the great plains. Small birds at about 5 inches long, they are aloft all day long, and almost always in groups. They migrate in large flocks and nest from Canada to the Gulf of Mexico. Watching a flock of swifts flow funnel-like into a chimney is a startling evening experience. The birds express themselves with a chatter of chipping cries, one of the easiest identifications of the species. Their only food is insects, and they are highly beneficial.



Chipping Sparrow (*Spizella passerina*)

This slim bird is only about 5 inches long. You can spot it by a chestnut brown crown, black line through the eye, and black bill. Chippies nest throughout the United States; they even breed as far south as Nicaragua and as far north as southern Canada, and winter in the southern United States and Mexico.

Chipping sparrows are domestic birds that show little fear of humans. They often build nests in gardens, cemeteries or golf courses, where mowed lawns provide feeding areas. Among the most insectivorous of all sparrows, their diet consists mainly of insects, supplemented by weed seeds.

Adjectives are dangerous in describing wildlife, but chippies are just plain lovable.



Cowbird (*Molothrus ater*)

Cowbirds are the only native American birds to always lay their eggs in nests of other species, and have the young raised by foster parents. Warblers, finches, and sparrows, all smaller than cowbirds, are the chief victims of this practice, the fast growing foster chick monopolizing food and space to the detriment of the legitimate offspring.

This is the smallest blackbird, flocking in small groups, or mixing with grackles and red-wings. They are usually quiet, their only song a faint whistle. They range north into Canada and winter in the southeastern States. Grasshoppers, beetles, and a number of insects are eaten, and like other blackbirds, they do some damage to grain.



Crow (*Corvus* sp.)

Smart enough to adapt quickly to urban life, crows nest in such unlikely places as alongside the Pentagon, and feed in the White House grounds in Washington.

Typically, they feed in the early hours before many people are out, retreating to parks or fields when disturbed. Their nest-robbing, crop destroying habits are often exaggerated, and less attention paid to their diet of grubs, beetles, mice, and other pests.

Grackles, martins, flycatchers and other smaller birds, recognizing them as marauders, will chase crows in the spring and summer. Watching the little feathered dive-bombers attack the lumbering crow is quite a show, the larger bird always retreating as best he can, sometimes losing a few feathers, but seldom his dignity.

Downy Woodpecker (*Dendrocopos pubescens*)

Our smallest woodpecker at 6 inches; spotted with black and white. Dark bars on the outer tail feathers distinguish it from the similar but larger hairy woodpecker. Resident in the United States and the forested parts of Canada and Alaska.

This woodpecker is widely distributed, living in woodlands, orchards and gardens. Like the hairy woodpecker, it beats a tattoo on a dry resonant tree branch. To appreciative ears it has the quality of forest music. In a hole excavated in a dead branch the downy woodpecker lays four to six eggs. This and the hairy woodpecker are valuable human allies, their food consisting of some of the worst insect foes of orchard and shade trees. Beef, suet, fastened too high for dogs to pirate, will attract Downies to a feeding station.



Flicker (*Colaptes auratus*)

Length 13 inches; the yellow (salmon in western birds) under surfaces of the wing and tail, and white rump are characteristic. It breeds throughout the United States and in forested parts of Canada; winters in most of the southern United States.

The flicker inhabits open country and delights in parklike regions where trees are numerous but well-spaced. It is possible to insure the presence of this useful bird about the home and to increase its numbers. It nests in any large cavity in a tree and readily appropriates an artificial nesting box. The most terrestrial of our woodpeckers, it procures much of its food from the ground. The largest item of animal food is ants, of which it eats more than any other common bird. The flicker is more adapted to suburbs than to the larger cities.



Goldfinch (*Spinus* sp.)

The male is the only small, yellow bird with black wings and tail, with flight that is extremely undulating. In winter the species concentrate in areas where seed-laden plants are common.

They breed from Canada to Mexico and winter in the same range, nesting in July and August, after most birds have finished. The song is long-sustained, clear, light, and canary-like. In its flight, each dip is often punctuated by a simple cry of ti-dee-di-di.

Goldfinches are found along hedgerows, wood margins, brushy fields, and flower gardens, especially where cosmos are growing.



Grackle (*Quiscalus quiscula*)

Length 12 inches. It breeds throughout the United States west to Texas, Colorado, and Montana and in southern Canada and winters in the southern half of its breeding range.

This is a beautiful blackbird that is well known from its habit of congregating in city parks and nesting there year after year. Like other species which habitually assemble in large flocks, it is capable of inflicting damage on farm crops. It shares with crows and blue jays a habit of pillaging the nests of small birds, but it does much good by destroying garden pests, especially white grubs, weevils, grasshoppers, and caterpillars.



Green Heron (*Butorides virescens*)

A small, dark heron common to all water areas, breeding in a combination of weeded or brush habitats and marshes. It is also found along the wooded margins of lakes and ponds. It often shows more blue than green and is easily confused with the little blue heron. Its flight appears crowlike at a distance, moving with slow, arched wing beats.

The most generously distributed of small herons, its series of "kucks" or its loud "skyow" can often be heard in areas near urban settlements.

It breeds from the Gulf of Mexico north to southern Canada and winters from Florida south.



Herring Gull (*Larus argentatus*)

This is the common large sea gull of much of our interior and coasts and a familiar urban bird; a gray mantled, black wing tipped gull seen in garbage dumps and harbors in all U.S. coastal cities. Oceans, bays, estuaries, beaches, fields, inland lakes, reservoirs and large streams... all provide habitat for this inspirer of "Jonathan Livingstone Seagull."

His free wheeling grace in the sky and his raucous yet lonely kee-owe, ke-ow manage to bring beauty to even the most odoriferous city dump.

It breeds from the Arctic to the northern states and winters from the Great Lakes to the Gulf of Mexico.



House Sparrow (*Passer domesticus*)

Perhaps the most cited of birds, this import's incessant chattering, quarrelsome disposition, and abundance about human habitations distinguish it from our native sparrows. Actually, it is not a sparrow at all, but a weaver finch.

Almost universally condemned after its introduction into the United States, the house sparrow not only held its own, but increased in numbers and extended its range. It now occupies its own niche and is regarded with amusement and considerable affection in our inner cities.

In rural areas it does some damage to fruit, vegetables, and grain. On the other hand, it also eats a number of insects that damage those same crops.



House Wren (*Troglodytes aedon*)

Less than 5 inches long, this tiny bird seems to live right at home with a man-made house. It breeds throughout the United States, except for the South Atlantic and Gulf areas, and also nests in southern Canada. It winters in the southern United States and Mexico.

The rich, bubbling song of the familiar little house wren is one of the sweetest associations connected with town or suburban life. Its tiny body allows it to creep into all sorts of nooks and crannies for its insect food. A cavity in a fence post or porch roof, a wren box, a hole in a tree, will be welcomed as a nesting site. Their food is grasshoppers, beetles, bugs, spiders, cutworms, ticks, and plant lice.

Recognized universally as Johnny and Jenny wren, welcome neighbors, they still show peculiarities in their behavior. Jealous of their home areas, wrens sometimes puncture the eggs of other small species nesting nearby, and Johnny may have two, possibly three mates at one time.



Junco (Junco hyemalis)

A dark, slate-gray sparrow with conspicuous white outer tail feathers and a white belly. An abundant species, it breeds in brushy, cutover forests and is usually seen by urban dwellers when transient or wintering flocks come into residential areas. Juncos often winter at feeding stations in cities, suburbs, or towns.

It breeds from the tree line south to the northern states, farther south in the mountains. It winters in most of the U.S.



Killdeer (*Charadrius vociferus*)

These birds are commonplace in appearance and not very large at a length of 10 inches, but are distinguished by piercing and oft-repeated cries of "kildee." They breed throughout the United States and most of Canada, and winter from the central United States to South America.

The killdeer is probably the best known of the shorebirds, perhaps because of its contrasting colors and startling cry. It is noisy and restless, like people, but most of its activities are beneficial to man. Its food is harmful insects, particularly weevils and beetles, flies, ticks, and wondrously enough, mosquitoes and their larvae.

The four pointed eggs are marked like pebbles, and laid in an unlined depression on the ground. Such dangerous sites as gravel roads, quarries, or even potato patches have been used.



Mallard (*Anas Platyrhynchos*)

One of the largest ducks, mallards range across the entire northern hemisphere, and are probably the best known of all waterfowl, likely to set down in migration on small pools in city parks. It has also been widely domesticated or semidomesticated.

Its coloration makes identification easy, and the loud quack helps identify it. The birds breed in prairie waterholes in Canada, the Dakotas, Minnesota, and, to a minor extent, in other northern States. They move with the great spring and fall migrations and, adjusting easily to the presence of man, are likely to be seen in town or city. Add the domesticated mallards that swim about in so many parks and you have the most urbanized of the ducks that can still claim a wild heritage. They are most abundant in the Mississippi Valley.



Mockingbird (*Mimus polyglottos*)

Ten inches long and neatly but soberly feathered, this was the bird of the Old South, but it is resident now from southern Mexico north to Michigan, Maine, even up to Wyoming, and seems to be spreading farther.

Because of its incomparable medleys and ability to mimic other birds, whistles, clocks, and bells, the mockingbird is the most renowned singer of the Western Hemisphere. Even in confinement it is a masterly performer, and in the nineteenth century, many were trapped and sold for cage birds. This practice ceased long ago, under law and close scrutiny. Mockers will feed on cultivated fruits, but they have so won human affection that this is rarely charged against them--principally because of that reputation as a songster and the fact that they eat a variety of destructive insects.

Raisins, oranges, or apples will bring them to a feeding station. To prevent them driving all other birds away from your tray, it helps to put the mocker's rations at a distance, preferably across the yard, or on the opposite side of the house.



Mourning Dove (*Zenaida macoura*)

A dark spot on the side of the neck distinguishes this bird from other native doves and pigeons except for the white-wing of the southwest.

Also known as turtle dove, the "mourner" frequently nests in suburban and city shrubbery throughout the United States, Mexico, and southern Canada; it winters from the central United States to Panama--and is part of folklore in all those countries.

Mourning doves eat the seeds of plants, including grain, plus berries and the small wild fruits of any region through which they pass.

Despite that melancholy but peaceful "coo," they are restless migratory creatures. Doves live in the large cities, small towns, villages, and countryside; songs are sung and poems written about them; they are esteemed game birds that may nest in trees in your yard.



Myrtle Warbler (*Dendroica coronata*)

Myrtle warblers are tiny mites that live up the trees and shrubs in the spring migration. Traveling in small flocks, they seem to be constantly in motion. Flitting from branch to branch searching for small insects and their eggs. Like flycatchers, they snap up larger bugs on the wing. To a quiet observer, they seem trusting birds often singing at close range.

Some winter as far north as the New England coast, wherever bayberry thickets offer fruit and shelter, and others move on to the southern states. From these wintering grounds they migrate to nesting grounds in the evergreen forest of the northern states and Canada. In their fall flight south, they seem subdued, the bright yellow on the crown and flanks having disappeared, and the lemon colored rump the only remaining brilliant.



Nighthawk (*Chordeiles minor*)

Often seen on dull days as well as dawn or dusk, the long slender wings of nighthawks exaggerate their size. They are 10 inches long, but seem bigger.

At rest, they perch lengthwise on branches, crossarms, or logs, or on the ground. In the air, their flight is a series of fluttering spurts, followed by long glides. Before aviators broke the sound barrier, nighthawks had their own 'sonic boom,' created by diving vertically from considerable height and flaring sharply upward near the ground.

Flying insects, from mosquitoes to beetles and moths, are their only food. Nighthawks build no nest, the two young being raised on the bare ground, or flat roofs.

Nighthawks nest in all states except Hawaii and winter in South America.



Pigeon (*Columba livia*)

The common pigeon found in all U.S. cities is a descendant of the wild European rock dove that was introduced domestically in this country early in our history. Living and breeding in cities and suburbs, it is a permanent year-round resident and often is so populous as to be a nuisance, fouling building ledges, park benches, statues, and occasionally people.

Feeding the pigeons in city parks is an old custom, particularly for the young and old. This bird is probably the one most familiar and recognizable to the urban dwellers and may be their closest contact with the world of birds.



Purple Martin (*Progne subis*)

These birds breed throughout the United States and southern Canada, and down to central Mexico. They winter in South America.

This is the largest (8 inches long) of the swallow tribe. It formerly built its nest in cavities of trees and still does in wild districts, but having learned to live close to humans, it soon adopted domestic habits. The best way to have martins around is to erect apartment houses for them at suitable nesting sites--and protect that housing from use by other birds. The nest boxes should be about 15 feet from the ground and made inaccessible to cats. A colony of martins makes great inroads upon the insect population, as the birds not only feed upon insects but rear their young on the same diet.



Red-eyed Vireo (*Vireo olivaceus*)

The red eye of this small olive-green and white bird, although giving it a name, is of little help in identifying it. Abundant in eastern forests in its breeding season, it winters in South America. This bird is seen in deciduous trees in city parks during migration.

Its call is a monotonous series of short, abrupt phrases similar to a robin's. It is repeated as often as 40 times a minute, all through the day. It is lucky for suburban sleepers that the vireo doesn't sing at night.



Red-headed Woodpecker (*Melanerpes erythrocephalus*)

At 9 inches or so in length, this is a medium-sized woodpecker which occurs in the eastern states.

The red-head isn't really common even in its announced range, although it's easy to spot when it is working the neighborhood. It likes open, deciduous woods, parklike spaces, and is fond of cities where old trees line the streets. Like all its clan, its diet of harmful grubs, beetles, and other insects makes it a desirable bird, and the small amounts of fruit and acorns it eats are never missed.



Red-winged Blackbird (*Agelaius phoeniceus*)

About 9-1/2 inches long, the red-wing breeds in most of North America; it winters in the southern half of United States and down clear to Costa Rica.

The prairies of the upper Mississippi Valley, with their numerous sloughs and ponds, furnish ideal nesting places for red-wings, and this region has become the great breeding ground for the species, pouring forth the vast flocks that sometimes play havoc with grainfields. Red-wings are gregarious, living in flocks and breeding in communities. Their food is about one-fourth insects and three-fourths vegetable.



Robin (*Turdus migratorius*)

Probably the best known of the United States birds, and widely believed a harbinger of spring, adults are 10 inches long. They breed in the United States and Canada, and winter in most of the United States, ranging south to Guatemala.

One of the most cherished of our native birds, the robin is an omnivorous feeder. While its food includes many worms and insects, it is especially fond of fruit, particularly cherries, mulberries, and strawberries. Like the bluebird, it is a thrush.

Highly adaptable, it is friendly and trusting in cities and towns, and wild and distrustful of man when living in wilderness areas.



Ruby-throated Hummingbird (*Archilochus colubris*)

A widely seen hummingbird east of the Great Plains, the ruby-throats are exquisite bits, capable of incredible flight, moving in any direction on wings vibrating faster than sight or able to hover motionless while spectators are breathless. They are plentiful--one just shouldn't use the word "common" about this lovely pulse of bright energy.

They sup on nectar from garden flowers or blossoming "weeds" and are attracted to yards or gardens by tubes of sugar water properly hung. And they eat insects. Several other varieties of hummingbirds live in the West and all are tiny--smallest of American birds--and beat their wings so rapidly that the feathers produce a hum. All hover while feeding, mostly by dipping their long beaks in flowers, and all of them are incredibly pugnacious for so tiny a creature. Most migrate long distances, incredible as that seems.



Song Sparrow (*Melospiza melodia*)

This is the most widely distributed of all our native sparrows, appearing in one form or another from Florida to Alaska and range in color from pale to dark brown.

They love water and are most numerous where streams, ponds, or marshes offer dense cover, but yards with shrubs and vines will attract them.

Their space requirements are small. A pair will live and nest in 1-1/2 acres or less. They nest on or near the ground, both parents help raise the young, and they raise up to four broods a year. Cowbirds often lay eggs in their nests, and are considered with dogs, cats, and rats as their greatest enemies.

There are many sparrows with spotted breasts, but the heavy dot in the center of the chest and the streaks on breast and flanks distinguish this bird from others.



Sparrow Hawk (*Falco sparverius*)

Length about 10 inches; one of the best known and handsomest, as well as smallest, of North American hawks. Breeds throughout the United States, Canada, and northern Mexico; winters in the United States and south Guatemala.

The sparrow hawk, a true falcon, lives in the more open areas and builds its nest in hollow trees. It is often found where telephone and power poles afford it convenient perching and feeding places, and may be seen hovering high over its intended prey. Its food consists of insects, small mammals, birds, spiders, and reptiles. Grasshoppers, crickets, terrestrial beetles, and caterpillars make up considerably more than half its subsistence, while field mice, house mice, and shrews cover fully 25 percent of its annual supply.



Starling (*Sturnus vulgaris*)

There are few people in the United States who have not seen starlings, even though the viewers might not know the label. Introduced into this country in the 1880's, they took hold rapidly and became permanent residents everywhere in the Nation, plus southern Canada and northern Mexico. They live in city parks and crevices of buildings, using large communal roosts in winter; you can hear the tribe gathering on cold nights along the face of many a downtown office building.

Frequently characterized as pests, they are certainly abundant. Their own call is a jittery squeak, but they imitate many birds, and sunlight brings out a shimmer of colors in their plumage. They eat almost anything, but that includes a lot of insects like Japanese beetles. Don't scoff at starlings; they're aggressive, quarrelsome, and determined, and they are surely here to stay.



Towhee (*Pipilo erythrophthalmus*)

The bird remotely resembles the robin, although smaller and more slender. It frequents bushy places and is often detected by noisy rummaging among dead leaves.

It breeds in open brushy places, barrens, slashings, and forest edges from Canada to the gulf coast, and often ventures into landscaped yards.

Its call is a loud chewink, and the southern birds have a proper southern drawl, a slurred shrink.



Tufted Titmouse (*Parus bicolor*)

This sparrow-sized, active mite is often heard before it is seen. Its spring call of peter, peter, peter is a clear whistle, audible at some distance.

Insects are a large part of its food, but it takes seed and nuts from a station quite readily, and is quick to scold if your feeder is empty. It also responds to "squeaking," the technique bird watchers use to attract many species.

Preferring wooded areas, it appears in small groups in winter. It nests in cavities and bird boxes, and being non-migratory, often uses these same shelters for winter roosts.

The tufted titmouse is restricted to the eastern half of the country, but it has close relatives in the west.



Turkey Vulture (*Cathartes aura*)

"What a lovely child of God it is, soarin' up there," said Fr. Hogan in the novel "Children of Hunger." And he added, "Of course, down on the ground it's a buzzard. Lots of things in the world seem to be like that."

Thus, a fictional view of the turkey vulture and the less widespread black vulture. The turkey vulture summers up into Canada and permanently ranges the southern United States. It is a common sight along roadsides and sometimes above cities. These common carrion eaters are natural scavengers, and highly useful ones, but they are a little hard to admire except at a distance. A large bird, often more than 30 inches long and with great wingspread, they don't need to be fed. Our driving habits and our careless disposal of garbage generally provide plenty of food for them.



White-breasted Nuthatch (*Sitta carolinensis*)

With a length of 6 inches, this resident of the United States, southern Canada and Mexico might readily be mistaken by a casual observer for a small woodpecker. But its call--an oft-repeated "yak"--is very unwoodpecker-like. Also unlike either woodpeckers or creepers, it climbs downward head first as easily as upward, seeming to defy the laws of gravity.

"Nuthatch" was suggested by its habit of wedging nuts in crevices of bark so as to break them open by blows from a sharp, strong bill. The white-breast gets its living from the trunks and branches of trees, over which it walks from daylight to dark. Insects and spiders constitute about half of its food. More than half of its vegetable food consists of acorns and other nuts or large seeds. It's a bird of the wooded suburbs, and will feed at sheltered stations offering suet, sunflower seeds, or nuts.



White-crowned Sparrow (*Zonotrichia leucophrys*)

From tail-tip to beak, this perky flyer is 7 inches long and looks like the white-throated sparrow, but the latter has a yellow spot beside its eyes. White-crown breeds in the high country of New Mexico, Colorado, Wyoming, Montana, and the Pacific coast; it winters in the southern half of the United States and in northern Mexico.

This beautiful sparrow is numerous in the West, but rather rare elsewhere, so watch for it carefully if you're in the East, for it is shy and retiring there. But the white-crown is bolder and more conspicuous in the Far West, often frequenting gardens, parks, and yards. Like most sparrows, it is a seed eater by preference--it appears readily at sheltered feeding stations. Insects comprise less than 10 percent of its diet.



Wood Pewee (contopus sp.)

The bird of this painting ranges from the east coast through the Mississippi Valley, where its range meets that of the western pewee.

They are hard to tell apart visually, although the songs are quite different. Both species also look like eastern phoebes, so spotting this bird with assurance requires some study. The names of all these birds are based upon their calls, and all are flycatchers.

The pewees like groves of mixed trees, and at twilight the eastern species sings a plaintive whistled song that is longer and more varied than its daylight song. You are much more likely to see or hear these birds in outer suburbia housing areas than in the inner city or on shopping center parking lots, since they require tall trees and cannot be heard above traffic noises.



Wood Thrush (*Hylocichla mustelina*)

This bird is at least fairly common in suburban groves all over the eastern United States. Adults are a bit over 7 inches long and their song is like a flute phrase followed by a soft trill, heard usually at dawn or dusk.

There are a number of other common thrushes. The hermit has a wide range, summering up into mid-Canada and wintering in the southern United States and Mexico. Veery, Swainson's, and gray-cheeked thrushes are also widespread. The wood thrush is the largest and probably the most citified, at least in terms of living in woody areas near cities. It is also the only one with a heavily spotted breast.

The nest is similar to a robin's, but without so much mud, and is usually twenty-five feet or less from the ground in a tree or shrub.



Yellowthroat (*Geothlypis trichas*)

This is a gay little warbler that is abundant, at least in summer, across the United States and most of Canada wherever there are moist shrubby areas. It's a permanent resident in southern-most United States and northern Mexico--and north up the Pacific coast to San Francisco. The yellowthroat lives in shrubs in moist areas, showing its distinctive markings to passersby. The female doesn't have a black mask, but otherwise looks much like the male.

These warblers nest on or near the ground in moist areas and eat mainly insects, including plant lice; don't look for them in the tops of tall trees. Adults are about 5 inches long. There are, of course, a lot of warblers over the continent, but the yellowthroat is widely distributed and widely admired. Keep your wet areas if you want to keep yellowthroats around.



Yellow Warbler (*Dendroica petechia*)

Although similar to the goldfinch, this warbler lacks the black wings and tail. Its cheerful, bright call can be heard by urban dwellers from willows, small trees, and shrubs growing on wet grounds and in residential areas that contain an open growth of small ornamental trees.

A tropic winterer, he breeds from the tree limit in Canada to the southern states. When plagued by cowbirds laying eggs in its nest, this warbler builds a second nest on tip of the first, completely covering the cowbird's eggs, and any of its own in the bottom layer.

Habitats For Birds



**How To Create An Inviting
Yard To Attract Birds**



Habitats For Birds

Among the fondest and most memorable moments of childhood are the discoveries of songbirds nesting in the backyard. The distinctive, mud-lined nests of robins and their beautiful blue eggs captivate people of all ages. Likewise, the nesting activities of house wrens, cardinals, chickadees, and other common birds can stimulate a lifelong interest in nature.

As you learn to enjoy the beauty of birdlife around your home, you may wish to improve the "habitat" in your yard so that more birds will visit your property. You can attract birds by placing bird feeders, nest boxes, and bird baths in your yard, and by planting a variety of trees, shrubs, and flowers. These can provide good nesting sites, winter shelter, places to hide from predators and natural food supplies that are available year-round.

Backyard bird feeding is a convenient way to enjoy wildlife. More than 65 million Americans of all ages watch, feed and landscape for birds.

It doesn't matter where you live - in an apartment, townhouse or single family dwelling, in the city, suburbs or country. Just stand still and you'll hear them: wild birds. It is hard to imagine life without them.

Bird watching is one of the fastest growing forms of outdoor recreation in the country. Each year millions of people discover for the first time the joys of birdwatching. It's easy to understand why. Birds are fun to watch.

And you can watch them just about everywhere. The most convenient place to start is right in your own backyard. All it takes to get their attention is food or water, a place to build a nest and appropriate vegetation.



Backyard Bird Feeding

Getting Started

When you want to attract a particular bird species and keep it coming back to your backyard, what you do will be determined by where you live, and the time of year. For example, on any winter day, you are likely to see a cardinal at a sunflower feeder in Virginia, a goldfinch at a thistle feeder in Massachusetts and hummingbirds at a nectar feeder in southern California.

A bird field identification book has pictures of different birds and will help you find the names for the birds you're likely to see and the time of year you're most likely to see them. So, first determine what birds are likely to occur in your area.

Feeder Selection

When the ground is covered with snow and ice, it's hard to resist just tossing seed out the door. But it's healthier for the birds to get their handouts at a feeding station, rather than off the ground. Regardless of the season, food that sits on the ground for even a short time is exposed to contamination by dampness, mold, bacteria, animal droppings, lawn fertilizers and pesticides.

You can start simply with a piece of scrap wood elevated a few inches above the ground. Add a few holes for drainage and you've built a platform feeder. It won't be long before the birds find it.

Placement

There are several factors to consider after you've decided to feed birds in your backyard.

Where do you want to watch your birds? From a kitchen window ... a sliding glass door opening onto a deck ... a second-story window?



Pick a location that is easy to get to. When the weather is bad and birds are most vulnerable, you may be reluctant to fill a feeder that is not in a convenient spot near a door or an accessible window.

Also, pick a site where discarded seed shells and bird droppings won't be a cleanup problem.

Put your feeder where the squirrels can't reach. Squirrels become a problem when they take over a bird feeder, scaring the birds away and tossing seed all over. Squirrels have been known to chew right through plastic and wooden feeders.

If you've seen squirrels in your neighborhood, it is safe to assume they will visit your feeder. Think long and hard before you hang anything from a tree limb. Squirrels are incredibly agile, and any feeder hanging from a tree is likely to become a squirrel feeder.



In the long run, a squirrel-proof feeder or any feeder on a pole with a baffle is the least aggravating solution. The most effective squirrel-proof feeder is the pole-mounted metal "house" type.

If you must hang a feeder, select a tube protected with metal mesh. Most plastic "squirrel-proof" feeders, despite manufacturers' claims, may eventually succumb to the squirrels. Any wood or plastic feeder can be effective when mounted on a pole with a plastic or metal baffle, if the pole is at least 10 feet or more from a tree limb or trunk (squirrels can jump great distances).

Durability

Bird feeders are made from a variety of materials. You can buy disposable plastic bag feeders; feeders made of cloth, nylon, vinyl and metal netting; clear, lexan, colored and PVC plastic tubes; ceramic and terra cotta; redwood, western cedar, birch, pine and plywood; sheet metal and aluminized steel; glass tubes and bottles.



How long a feeder lasts depends on how well you maintain it, the effects of weather, and whether squirrels can get to it. Water can get into any feeder regardless of how carefully you protect it. Cloth, vinyl, nylon and metal netting feeders are inexpensive, but they do not protect your seed from spoiling in damp or wet weather. Improve them by adding a plastic dome.

Most wood, plastic, ceramic and solid metal feeders keep seed dry, but water can get into the feeding portals. Look for feeders with drainage holes in the bottoms of both the feeder hopper and the seed tray.

Even bowl-type feeders and trays with drainage holes will clog with seed and bird droppings that can mix with rainwater and be unhealthy for any animal. Look for shallow plate-like seed trays to catch dropped seeds while allowing spent seed shells to blow away.

When you feed birds, expect bird droppings and a leftover food mess. While you do not have to wash the feeder daily, you should clean it at least every few weeks. Diseases like salmonella can grow in moldy, wet seed and bird droppings in your feeder tray and on the ground below. Move your feeder a few feet each season to give the ground underneath time to assimilate the seed debris and bird droppings.

The maintenance required to keep your feeder clean varies according to the type of feeder. A thistle feeder for goldfinches should be cleaned about once a month depending on how often it rains. Feeding hummingbirds requires cleaning at the very least weekly, but preferably two or three times a week. Sunflower and suet feeders need to be cleaned only once a month.

Plastic, ceramic and glass feeders are easy to clean. Wash them in a bucket of hot, soapy water fortified with a capful or two of chlorine bleach. Use the same regimen with wood feeders, but substitute another disinfectant for the bleach so your wood won't fade.

Food Capacity

The ideal feeder capacity varies with your situation, and the types of birds you want to attract. If you feed hummingbirds, big feeders are not always better. One hummingbird will drink about twice its body weight (less than an ounce) a day. Early in the season, hummers are territorial and won't share a feeder. A sixteen-ounce feeder can be wasteful, or even lethal, because artificial nectar (sugar water) can ferment in the hot summer sun. A two-ounce feeder is more than enough for one hummer. Increase the size of your feeder depending on your location and how many hummers you see in your yard.



If you opt for a large-volume seed feeder, protect it from the weather and keep it clean. If after months of use, the birds suddenly abandon your feeder full of seed, it's time for a cleaning.

How Many Birds

If too many birds at your feeder become a problem, you can control their numbers by putting out smaller amounts of seed, or by using specialty seeds or restrictive feeders that will attract only certain species. If you fill your feeder only when it's empty, the birds will look for food elsewhere.

You can encourage small birds and discourage large birds with feeders that restrict access. Wood feeders with vertical bars and feeders covered with wire mesh frustrate larger birds.

The most non-selective feeders are the tray, platform or house feeders because they allow easy access by all birds.

Tube feeders without trays also restrict access to only small birds. Remove the perches, and you've further restricted the feeder to only those birds that can easily cling - finches, chickadees, titmice and woodpeckers.

If starlings are a problem at your suet feeder, discourage them by using a suet feeder with access only from the bottom. Starlings are reluctant to perch upside down. Chickadees and woodpeckers don't find that a problem.

You can virtually eliminate visits by birds you would rather not see by offering seeds they won't eat. If you use more than one type of seed, put them in separate feeders. This will reduce wasted seeds, as birds will toss unwanted seeds out of a feeder to get to their favorites.

Watch a feeder filled with a seed mix and you'll see the birds methodically drop or kick out most of the seeds to get to their favorite-sunflower.



Many birds prefer sunflower. Some prefer millet. A few prefer peanuts. Sparrows, blackbirds, doves and juncos will eat the other grains used in pre-made mixes: corn, milo, red millet, oats, wheat and canary seed. Birds will also kick out artificial "berry" pellets, processed seed flavored and colored to look like real fruit.

Black oil sunflower is the hands-down favorite of all the birds that visit tube and house feeders. Birds who visit platform feeders (doves and sparrows) favor white proso millet. Ducks, geese and quail will eat corn. Many cereal grains (corn, milo, oats, canary, wheat, rape, flax and buckwheat) in mixed bird seeds are NOT favorites of birds that visit tube feeders.

The most effective way to attract the largest variety of birds to your yard is to put out separate feeders for each food:

- a starling-resistant suet feeder
- a house feeder for sunflower
- a bluebird feeder a wire mesh cage feeder for peanut
- a nectar feeder
- a tube feeder for thistle
- a stationary or tray fruit feeder
- a house or platform feeder for millet

Suet Feeder



Feeding Tray



Thistle Feeder



Nut Feeder



Birds Attracted by Various Feeders and Foods

<i>Tube Feeder with Black Oil Sunflower</i>	goldfinches chickadees woodpeckers nuthatches	titmice redpolls pine siskins	<i>Fruit</i>	orioles tanagers mockingbirds bluebirds thrashers cardinals woodpeckers	jays starlings thrushes cedar waxwings yellow-breasted chats
<i>... Adding a Tray to the Tube Feeder Will Also Attract</i>	cardinals jays crossbills purple finches house finches	white-throated sparrows white-crowned sparrows	<i>Hanging Suet Feeder</i>	woodpeckers wrens chickadees nuthatches kinglets	thrashers creepers cardinals starlings
<i>Tray or Platform Feeder-with Millet</i>	doves house sparrows blackbirds juncos cowbirds towhees	white-throated sparrows tree sparrows white-crowned sparrows chipping sparrows	<i>Peanut Butter Suet</i>	woodpeckers goldfinches juncos cardinals thrushes	jays kinglets bluebirds wrens starlings
<i>Tray or Platform Feeder -- with Corn</i>	starlings house sparrows grackles jays juncos bobwhite quail	doves ring-necked pheasants white-throated sparrows	<i>Hanging Peanut Feeder</i>	woodpeckers chickadees titmice	

Platform Feeder or Tube Feeder and Tray - with Peanuts cardinals
grackles
titmice
starlings
jays

Niger Thistle Feeder with Tray goldfinches chickadees
house finches song sparrows
purple finches dark-eyed juncos
redpolls white-throated
pine siskins sparrows
doves

Nectar Feeder hummingbirds woodpeckers
orioles finches
cardinals thrushes
tanagers

Uninvited Guests at the Birdfeeder

Once you get your bird feeding station up and running, you may run into problems with two kinds of uninvited guests - those interested in the seeds (squirrels and chipmunks, rats and mice, and starlings and house sparrows), and those interested in eating a bird for dinner (cats and hawks).



When a squirrel is at the feeder, you're not likely to see birds. Squirrels will scare off the birds while they eat the seed and sometimes they will eat the feeder too. The simplest solution is a squirrel-proof feeder or pole.

Starlings and house sparrows are not native to North America and are aggressive towards other species. Choose your feeder and seed to exclude these species if possible.

Chipmunks, rats and mice can also become a problem where there is seed spillage under the feeder. Don't use mixed bird seed, and if you don't have a squirrel problem, add a feeder tray.

Feral cats and your neighbor's tabby are a serious threat to many birds. Keep feeders away from brushpiles and shrubbery, as this offers cats the necessary cover to surprise birds.

If there are no cats in your neighborhood and you find a pile of feathers near your feeder, look for a full-bellied hawk perching on a tree nearby. Don't put out poisons or try to trap hawks though, as this is against state and federal law.

Questions about Feeding Wild Birds

When is the best time to start?

Usually, whenever the weather is severe, birds will appreciate a reliable supplemental food source. In northern areas, start before the onset of cold weather so birds have time to find the feeder.

When's the best time to stop?

Although you can feed birds year -round, especially with fruit and nectar, you can stop feeding seeds once a reliable supply of insects is available in the spring.

Is it best to stop feeding hummingbirds after Labor Day?

There is no evidence that feeding hummingbirds after Labor Day will keep them from migrating. In fact, it may help a weakened straggler refuel for the long haul. Leave your nectar feeders out until the birds stop coming.

How long does it take for birds to find a feeder?

It may take more time for birds to find window feeders than hanging or pole-mounted feeders. You may want to wrap aluminum foil around the top of the feeder hanger. Sometimes all it takes is the reflection of light on the foil to catch their attention.

My feeder is full of seeds. I haven't seen a bird in months. Am I doing something wrong?

When birds desert your feeder, it may be simply that a lot of natural food is available nearby Or something may be wrong, such as spoiled seeds or a contaminated feeder. Throw the seeds away and wash the feeder. Look at where your feeder is placed. Be sure it's not vulnerable to predators. At the same time, make sure it is not in an open area, away from the cover in which birds usually travel.

Will birds' feet stick to metal feeders and perches in the wet winter weather?

Birds don't have sweat glands in their feet, so they won't freeze onto metal feeders. There's no need to cover any metal feeders parts with plastic or wood to protect birds' feet, tongues or eyes.

Do wild birds need grit?

Birds have no teeth to grind their food. The dirt, sand, pebbles and grit they eat sit in their crop and help grind up their food. Adding grit to your feeder is helpful, particularly in the winter and spring. Crushed eggshells do the same thing, and in the spring have an added benefit: they provide birds with extra calcium for producing eggs of their own.

Can birds choke on peanut butter?

There is no evidence that birds can choke on peanut butter. However, birds have no salivary glands. You can make it easier on them by mixing peanut butter with lard, cornmeal or grit. Your birds will appreciate drinking water too, from a bird bath or trough.

Won't suet go bad in the summer?

In the winter, raw beef fat from the local butcher is all you need for your suet feeder. When temperatures rise, raw fat can melt and get rancid. It's safer to use commercially rendered suet cakes in the spring and summer months. Rendering (boiling) the fat kills bacteria.

What is hummingbird nectar? Do hummers need nectar fortified with vitamins and minerals?

You can make your own hummingbird nectar by adding 1/4cup of sugar to a cup of boiling water. Remember, sugar water will ferment when left in the hot sun, turning nectar deadly. Do not put out a nectar feeder if you are not willing to clean it at least weekly, preferably twice a week.



Hummers eat insects for their protein. There is no evidence that these tiny birds need vitamin and mineral supplements. There is also no evidence that

adding red food coloring to nectar will harm the birds, but it probably is not necessary to attract them. Just put your feeder near red flowers or buy a red hummingbird feeder.

How can I avoid bees at my hummingbird feeder?

Bees will inevitably visit your hummingbird feeder, especially in hot weather. Little plastic bee guards may help keep them from getting nectar but it won't stop them from trying. Don't take the chance of contaminating your nectar by putting vegetable oil around the feeding portals. One solution is to add a few small feeders away from where people are likely to be bothered by bees.

How close to my window can I put a feeder?

Birds will come right to your window. Sometimes it takes a while for them to overcome their initial reluctance, so be patient. Don't worry that a feeder on the window will cause birds to fly into the window. Birds fly into the window because they see the reflection of the woods. Window feeders and decals help break up the reflection.

Is cracked corn coated with a red dye safe to use?

No. The red or pink coating is capstan, a fungicide used on seeds meant for planting. If you buy a bag of cracked corn or other seed treated with capstan, return it to the store. It can kill horses, other mammals and wild birds.

I bought a bag of sunflower seeds early in the spring. Over the summer first noticed worms, then moths. What can I do to keep the bugs out?

Moths lay their eggs in sunflower seeds. The eggs lay dormant as long as the seeds are stored in a cool dry place. In the summer, seeds get hot and the eggs hatch. The best way to avoid this problem is to buy seeds in smaller quantities, or store your seeds in a cool, dry place. It also helps to know where your retailer stores the seed. An air-conditioned storage unit is the better choice.

Insects also lay their eggs in burlap bags. Don't buy seeds in burlap bags. Don't buy seed in paper and plastic bags with patched holes. That may be a sign of insect or rodent infestation.

Homes for Birds

Birds You Can Attract to Nest Boxes

Many of the birds that visit feeders and baths may stay and nest in nearby trees. Most of them, including cardinals, doves and orioles, don't nest in boxes. You can still help them by considering their food and shelter requirements in your landscape plans.

More than two dozen North American birds nest in bird houses. The following descriptions will help you determine which birds might visit your neighborhood.

Bluebirds

If you put up a bluebird house near an old field, orchard, park, cemetery or golf course, you might have a chance of attracting a pair of bluebirds. They prefer nest boxes on a tree stump or wooden fence post between three and five feet high. Bluebirds also nest in abandoned woodpecker nest holes.

The most important measurement is the hole diameter. An inch and a half is small enough to deter starlings, which, along with house sparrows, have been known to kill bluebirds, as well as adults sitting on the nest. Bluebirds have problems with other animals too. Discourage cats, snakes, raccoons and chipmunks by mounting the house on a metal pole, or use a metal predator guard on a wood post.

American Robins

The robin is our largest thrush. They prefer to build their nest in the crotch of a tree. If you don't have an appropriate tree, you can offer a nesting platform. Pick a spot six feet or higher up on a shaded tree trunk or under the overhang of a shed or porch. Creating a "mud puddle" nearby offers further enticement, as robins use mud to hold their nests together.

Chickadees, Nuthatches and Titmice

Chickadees, titmice and nuthatches share the same food, feeders, and habitat. If you put a properly designed nest box in a wooded yard, at least one of these species might check it out. Put chickadee houses at eye level. Hang them from limbs or secure them to tree trunks. The entrance hole should be 1 1/8 inches to attract chickadees, yet exclude house sparrows. Anchor houses for nuthatches on tree trunks five to six feet off the ground.



Brown Creepers and Prothonotary Warblers

Look for brown creepers to nest behind the curved bark of tree trunks. In heavily wooded yards, slab bark houses appeal to creepers. Prothonotary warblers also prefer slab bark houses, or bluebird boxes attached to a tree trunk, but theirs must be placed over water (lakes, rivers or swamps) with a good canopy of trees overhead.

Wrens

Wrens don't seem to be very picky about where they nest. Try nest boxes with a 1 inch x 2 inch horizontal slot (1½ inch x 2 ½ inch for the larger Carolina wrens) instead of a circle. These are easier for the wrens to use. However, the larger the opening, the more likely it is house sparrows will occupy the box.

Wrens are known for filling a nest cavity with twigs, regardless of whether they use the nest to raise their young. Since male house wrens build several nests for the female to choose from, hang several nest boxes at eye level on partly sunlit tree limbs. Wrens are sociable and will accept nest boxes quite close to your house.



Tree and Violet--green Swallows

Tree swallows prefer nest boxes attached to dead trees. Space the boxes about seven feet apart for these white-bellied birds with iridescent blue-green backs and wings. The ideal setting for these insect-eaters is on the edge of a large field near a lake, pond or river.

Violet-green swallows nest in forested mountains of the West; boxes placed on large trees in a semi-open woodland will attract them.

Barn Swallows and Phoebes

If you have the right habitat, like an open barn or old shed, barn swallows and phoebes are easy to attract. It's their nesting behavior, not their plumage or song, that catches your attention. However, these birds tend to nest where you would rather not have them: on a ledge right over your front door. To avoid a mess by your door, offer the birds a nesting shelf nearby where you'd rather have them.



Purple Martins

Many people want martins in their yards because, it's been said, these birds eat 2,000 mosquitoes a day. While it's true that they eat flying insects, don't expect purple martins to eliminate mosquitoes in your yard completely. Martins prefer dragonflies, which prey on mosquito larvae. If you want to help rid your yard of mosquitoes, put up a bat roosting box. One bat can eat thousands of mosquitoes a night.



Martins are entertaining creatures, however, and you'll enjoy watching their antics in your backyard. You have the best chance of attracting martins if you put a house on the edge of a pond or river, surrounded by a field or

lawn. Martins need a radius of about 40 feet of unobstructed flying space around their houses. A telephone wire nearby gives them a place to perch in sociable groups.

Martins nest in groups, so you'll need a house with a minimum of four large rooms-6 or more inches on all sides, with a 2 1/2 inch entrance hole about 1 1/2 inches above the floor. Ventilation and drainage are critical factors in martin house design. Porches, railings, porch dividers and supplemental roof perches, like a TV antenna, make any house more appealing.

You can also make houses from gourds by fashioning an entrance hole and small holes in the bottom for drainage. If you use gourds, it's not necessary to add railings and perches. Adult martins will perch on the wire used to hang the houses. Before you select a house, think about what kind of pole you're going to put it on. Martins occupy a house ten to twenty feet off the ground. Some poles are less cumbersome than others.

Selecting a House

In the bird house business, there's no such thing as "one size fits all." Decide which bird you want to attract, then get a house for that particular bird. Look through any book or catalog and you'll see bird houses of all sizes and shapes, with perches and without, made of materials you might not have thought of. recycled paper, gourds, plastic, rubber, pottery, metal and concrete. The proper combination of quality materials and design makes a good birdhouse.



Materials

Wood is just about the best building material for any birdhouse. It's durable, has good insulating qualities and breathes. Three-quarter-inch thick bald cypress and red cedar are recommended. Pine and exterior grade plywood will do, but they are not as durable.

It makes no difference whether the wood is slab, rough-cut or finished, as long as the inside has not been treated with stains or preservatives. Fumes from the chemicals could harm the birds.

There's no need to paint cypress and cedar, but pine and plywood houses will last longer with a coat of water-based exterior latex paint. White is the color for purple martin houses. Tan, gray or dull green works best for the other cavity nesting species. The dull, light colors reflect heat and are less conspicuous to predators. Don't paint the inside of the box or the entrance hole.



Regardless of which wood you select, gluing all the joints before you nail them will extend the life of your bird house. Galvanized or brass shank nails, hinges and screws resist rusting and hold boxes together more tightly as they age.

Resist the temptation to put a metal roof on your bird house. Reflective metal makes sense for martin houses up on a sixteen-foot pole, but when it's tacked onto the roof of a wood chickadee house, the shiny metal is more likely to attract predators.

Natural gourds make very attractive bird houses. They breathe, and because they sway in the wind they are less likely to be taken over by house sparrows and starlings.

Grow your own gourds and you'll have dozens to choose from in the years ahead. If you don't have the space to grow them, a coat of polyurethane or exterior latex (on the outside only) will add years to the one you have.

Properly designed pottery, aluminum (for purple martins only), concrete and plastic houses are durable, but don't drop them.

Gourd houses are the easiest to set up. String them from a wire between two poles, from a sectional aluminum pole, or on pulleys mounted to a crossbar high up on a pole.

You can mount lightweight aluminum houses for martins on telescoping poles, providing easy access for maintenance and inspection. Because of their weight (more than 30 pounds), wood houses should not be mounted on telescoping poles. You'll have to use a sturdy metal or a wood pole attached to a pivot post. The problem with this lowering technique is that you can't tilt the house without damaging the nests inside. If you put your house on a shorter, fixed pole, ten to twelve feet high, you can use a ladder to inspect and maintain it.

Flycatchers

The great crested flycatcher and its western cousin, the ash-throated flycatcher, are common in wooded suburbs and rural areas with woodlots. Their natural nesting sites are abandoned woodpecker holes. Flycatchers may nest in a bird house if it is placed about ten feet up in a tree in an orchard or at the edge of a field or stream. This is a longshot, but well worth the effort if you are successful.

Woodpeckers

You can attract all types of woodpeckers with a suet feeder, but only the flicker is likely to use a bird house. They prefer a box with roughened interior and a floor covered with a two-inch layer of wood chips or coarse sawdust. Flickers are especially attracted to nest boxes filled with sawdust, which they "excavate" to suit themselves. For best results, place the box high up on a tree trunk, exposed to direct sunlight.

Try building a birdhouse for the other species of woodpeckers following the guidelines in this booklet. You might be surprised!

Owls

Most owls seldom build their own nests. Great horned and long-eared owls prefer abandoned crow and hawk nests. Other owls (barred, barn, saw-whet, boreal and screech) nest in tree cavities and bird houses.

Barn owls are best known for selecting nesting sites near farms. Where trees are sparse, these birds will nest in church steeples, silos and barns. If you live near a farm or a golf course, try fastening a nest box for owls about 15 feet up on a tree trunk.

Screech owls prefer abandoned woodpecker holes at the edge of a field or neglected orchard. They will readily take to boxes lined with an inch or two of wood shavings. If you clean the box out in late spring after the young owls have fledged, you may attract a second tenant—a kestrel. Trees isolated from larger tracts of woods have less chance of squirrels taking over the box.



Be sure to provide ventilation, drainage, and easy access for maintenance and monitoring. Concrete (or a mix of concrete and sawdust) offers protection other houses cannot: squirrels can't chew their way in.

Design

How elaborate you make your bird house depends on your own tastes. In addition to where you place the box, the most important considerations are: box height, depth, floor dimensions, diameter of entrance hole and height of the hole above the box floor.

Refer to the following chart before building your nest box, keeping in mind that birds make their own choices, without regard for charts. So don't be surprised if you find tenants you never expected in a house you intended for someone else.



Nest Box Dimensions					
<i>Species</i>	<i>Box floor (inches)</i>	<i>Box height (inches)</i>	<i>Entrance height (inches)</i>	<i>Entrance (inches)</i>	<i>Placement diameter height (feet)</i>
American Robin*	7 x 8	8	--	--	
Eastern & Western Bluebirds	5 x 5	8 - 12	6 - 10	1 ½	4 - 6
Mountain Bluebirds	5 x 5	8 - 12	6 - 10	1 ½	4 - 6
Chickadee	4 x 4	8 - 10	6 - 8	1 1/8	4 - 15
Titmouse	4 x 4	10 - 12	6 - 10	1 ¼	5 - 15
Ash-throated Flycatcher	6 x 6	8 - 12	6 - 10	1 ½	5 - 15
Great Crested Flycatcher	6 x 6	8 - 12	6 - 10	1 ¾	5 - 15
Phoebe*	6 x 6	6	--	--	8 - 12
Brown-headed/Pygmy/Red-breasted Nuthatch	4 x 4	8 - 10	6 - 8	1 ¼	5 - 15
White-breasted Nuthatch	4 x 4	8 - 10	6 - 8	1 3/8	5 - 15
Prothonotary Warbler	5 x 5	6	4 - 5	1 1/8	4 - 8
Barn Swallow*	6 x 6	6	--	--	8 - 12
Purple Martin	6 x 6	6	1 - 2	2 ¼	6 - 20
Tree and Violet-green Swallows	5 x 5	6 - 8	4 - 6	1 ½	5 - 15
<i>*Use nesting shelf, platform with three sides and an open front</i>					

Nest Box Dimensions					
<i>Species</i>	<i>Box floor (inches)</i>	<i>Box height (inches)</i>	<i>Entrance height (inches)</i>	<i>Entrance (inches)</i>	<i>Placement diameter height (feet)</i>
Downy Woodpecker	4 x 4	8 - 10	6 - 8	1 ¼	5 - 15
Hairy Woodpecker	6 x 6	12 - 15	9 - 12	1 ½	8 - 20
Lewis's Woodpecker	7 x 7	16 - 18	14 - 16	2 ½	12 - 20
Northern Flicker	7 x 7	16 - 18	14 - 16	2 ½	6 - 20
Pileated Woodpecker	8 x 8	16 - 24	12 - 20	3 x 4	15 - 25

Red-Headed Woodpecker	6 x 6	12 - 15	9 - 12	2	10 - 20
Yellow-bellied Sapsucker	5 x 5	12 - 15	9 - 12	1 ½	10 - 20
Bewick's/House Wrens	4 x 4	6 - 8	4 - 6	1 ¼	5 - 10
Carolina Wrens	4 x 4	6 - 8	4 - 6	1 ½	5 - 10
Barn Owl	10 x 18	15 - 18	4	6	12 - 18
Screech-Owl and Kestrel	8 x 8	12 - 15	9 - 12	3	4 - 8
Osprey	48 x 48 (platform)				10 - 30
Red-tailed Hawk/Great Horned Owl	24 x 24 platform				
Wood Duck	10 x 18	10 - 24	12 - 16	4	10 - 20
<i>*Use nesting shelf, platform with three sides and an open front</i>					

Now that you have the correct dimensions for your bird house, take a look at how to make it safe: ventilation, drainage, susceptibility to predators, and ease of maintenance.

Ventilation

You should provide air vents in bird boxes. There are two ways to provide ventilation: leave gaps between the roof and sides of the box, or drill 1/4 inch holes just below the roof.

Drainage

Water becomes a problem when it sits in the bottom of a bird house. A roof with sufficient slope and overhang offers some protection. Drilling the entrance hole on an upward slant may also help keep the water out. Regardless of design, driving rain will get in through the entrance hole. You can assure proper drainage by cutting away the corners of the box floor and drilling 1/4 inch holes. Nest boxes will last longer if the floors are recessed about 1/4 inch.

Entrance Hole

Look for the entrance hole on the front panel near the top. A rough surface both inside and out makes it easier for the adults to get into the box and, when it's time, for the nestlings to climb out.

If your box is made of finished wood, add a couple of grooves outside below the hole. Open the front panel and add grooves, cleats or wire mesh to the inside. Never put up a bird house with a perch below the entrance hole. Perches offer starlings, house sparrows and other predators a convenient place to wait for lunch. Don't be tempted by duplexes or houses that have more than one entrance hole. Except for purple martins, cavity-nesting birds prefer not to share a house. While these condos look great in your yard, starlings and house sparrows are inclined to use them.

Accessibility

Bird houses should be easily accessible so you can see how your birds are doing and clean out the house. Monitor your bird houses every week and evict unwanted creatures such as house sparrows or starlings.

Be careful when you inspect your bird boxes—you may find something other than a bird inside. Don't be surprised to see squirrels, mice, snakes or insects. Look for fleas, flies, mites, larvae and lice in the bottom of the box. If you find insects and parasites, your first reaction may be to grab the nearest can of insect spray. If you do, use only insecticides known to be safe around birds: 1 percent rotenone powder or pyrethrin spray. If wasps are a problem, coat the inside top of the box with bar soap.



Here's how to check your nest boxes for unwanted visitors:

Watch the nest for 20-30 minutes. If you don't see or hear any birds near the box, go over and tap on the box. If you hear bird sounds, open the top and take a quick peek inside. If everything is all right, close the box. If you see problems (parasites or predators), remove them and close the box.

A bird house with easy access makes the job simple. Most bird houses can be opened from the top, the side, the front or the bottom. Boxes that open from the top and the front provide the easiest access. Opening the box from the top is less likely to disturb nesting birds. It's impossible to open a box from the bottom without the nest falling out. While side- and front-opening boxes are convenient for cleaning and monitoring, they have one drawback: the nestlings may jump out. If this happens, don't panic. Pick them up and put them back in the nest. Don't worry that the adults will reject the nestlings if you handle them. That's a myth; most birds have a terrible sense of smell.



If you clean out your nest boxes after each brood has fledged, several pairs may use the nest throughout the summer. Some cavity-nesting birds will not nest again in a box full of old nesting material.

In the fall, after you've cleaned out your nest box for the last time, you can put it in storage or leave it out. Gourds and pottery last longer if you take them in for the winter. You can leave your purple martin houses up, but plug the entrance holes to discourage starlings and house sparrows.

Leaving your wood and concrete houses out provides shelter for birds, flying squirrels and other animals during winter. Each spring, thoroughly clean all houses left out for the winter.

Limiting Predator Access

Proper box depth, and roof and entrance hole design will help reduce access by predators, such as raccoons, cats, opossums, and squirrels. Sometimes all it takes is an angled roof with a three-inch overhang to discourage small mammals.

The entrance hole is the only thing between a predator and a bird house full of nestlings. By itself, the 3/4-inch wall is not wide enough to keep out the arm of a raccoon or house cat. Add a predator guard (a 3/4-inch thick rectangular wood block with an entrance hole cut in it) to thicken the wall and you'll discourage sparrows, starlings, and cats.

Bird House Placement

Where you put your bird house is as important as its design and construction. Cavity-nesting birds are very particular about where they live. If you don't have the right habitat, the birds are not likely to find the house. You can modify your land to attract the birds you want to see by putting out a bird bath, planting fruit-bearing shrubs, including more trees or installing a pond with a waterfall.



Once you've matched up the light bird house with the appropriate habitat, you have to know where to put the nest box. Should you hang it from a tree limb, nail it to a fence or mount it on a pole or a tree trunk?

Most species require a fairly narrow range of heights for nest boxes. After checking the table in this brochure, pick a height that's convenient for you. After all, you will want to watch what goes on and keep the box clean. If you want to watch chickadees from your second floor window or deck, fifteen feet is reasonable but it's a lot easier to clean out a box at eye level.

Here are some tips on where to put bird houses:
don't put bird houses near bird feeders.

houses mounted on metal poles are less vulnerable to predators than houses nailed to tree trunks or hung from tree limbs.

use no more than four small nest boxes or one large box per acre for any one species.

put about 100 yards between bluebird boxes and 75 yards between swallow boxes. (If you have both species, pair the houses with one bluebird box 25 feet from a swallow box.)

don't put more than one box in a tree unless the tree is extremely large or the boxes are for different species.

if you have very hot summers, face the entrance holes of your boxes north or east to avoid overheating the box.

Protection from Predators



Cats

Nesting birds are extremely vulnerable to cats, as are fledglings and birds roosting for the night. Bell collars on cats offer birds little protection. Nailing a sheet metal guard or cone to a tree trunk is unsightly, but may deter less agile felines. Houses mounted on metal poles are the most difficult for predators to reach, especially if you smear the poles with a petroleum jelly and hot pepper mixture. The best deterrent is for owners to keep their cats inside whenever possible.

Dogs

Pet dogs are a hazard to nestlings in the spring and summer. Don't let your dog run loose during nesting time.

Squirrels

Red squirrels, and sometimes gray squirrels, can become a serious menace to bird houses and the birds themselves. If you find your nest hole enlarged, chances are a red squirrel is the culprit. Once inside the box, squirrels make a meal of the eggs and young. Adding a predator guard made of sheet metal to the entrance hole is usually enough to keep squirrels out.

Raccoons and Opossums

Raccoons and opossums will stick their arms inside nest boxes and try to pull out the adult, young, and eggs. Adding a 1/2-inch thick predator guard to the bird house or an inverted cone to its pole support is a simple solution.

Snakes

Snakes play an important part in the balance of nature. If you find one in your bird house, don't kill it. Snake-proof your house by putting it on a metal pole lathered with petroleum jelly or red cayenne pepper.

House Sparrows and Starlings

If you don't discourage them, these two nuisance species introduced from Europe will harass or kill cavity-nesting birds. Since house sparrows and starlings are not protected by law, you may destroy their nests. But remember, other birds are protected by law.

House Wrens

House wrens sometimes interfere with the nesting success of other birds by puncturing their eggs. But, unlike the house sparrow and starling, these birds are native to North America and are protected by law. Don't be tempted to intervene when wrens appear at your backyard birdhouse.

Insects

Many insects lay their eggs and pupate in bird houses. Inspect your bird houses for signs of gypsy moths, blow flies, wasps, ants, gnats and bees. Keep bees and wasps from attaching their nests by coating the inside of the roof with bar soap. In areas where gypsy moths abound, avoid placing boxes in oak trees, which the gypsy moths favor.

Pyrethrin and rotenone insecticides are recommended for killing fly larvae, bird lice and mites after birds have finished nesting for the season.

Attracting Birds

As people learn to enjoy the beauty of birds around their home, they may wish to improve the "habitat" in their yard so that more birds will visit their property. You can attract birds by placing bird feeders, nest boxes and bird baths in your yard, and by planting a variety of trees, shrubs, and flowers. These can provide good nesting sites, winter shelter, places to hide from predators and natural food supplies that are available year-round.



Landscaping for Birds

The most surefire way to attract birds to your backyard is to make certain the appropriate habitat is available to them. You may be lucky and already have a good supply of food, shelter, and water available for our feathered friends. In that case, you have to do little more than stand back and watch.

However, for most backyards, bird habitat must be created. It's called "landscaping for birds" and it can be as simple or extravagant as you wish. Whatever the approach, anyone who has ever tried this type of landscaping comes away with a real love for it after their first sparkling hummingbirds hover at the coral bells, or the perky catbird comes down for a drink of water from the birdbath, or the sleek waxwings gather en masse to sample bittersweet berries.

Benefits of Landscaping for Birds

You can derive many benefits from landscaping to attract birds to your yard:

Increased Wildlife Populations

You can probably double the number of bird species using your property with a good landscaping plan.

Energy Conservation

By carefully arranging your conifer and hardwood trees, you can lower winter heating and summer cooling bills for your house.

Soil Conservation

Certain landscape plants can prevent soil erosion.

Natural Beauty

A good landscaping plan contributes to a beautiful, natural setting around your home that is pleasing to people as well as birds.



Wildlife Photography

Wildlife photography is a wonderful hobby for people of all ages.

Birdwatching

Try keeping a list of all the birds you see in your yard or from your yard. Some people have counted nearly 20 species of birds in their yard!

Natural Insect Control

Birds such as tree swallows, house wrens, brown thrashers and orioles eat a variety of insects.

Food Production

Some plants that attract wildlife are also appealing to humans. People and wildlife can share cherries, chokecherries, strawberries, and crabapples.

Property Value

A good landscaping plan can greatly increase the value of your property by adding natural beauty and an abundance of wildlife.

Habitat for Kids

Some of the best wildlife habitats are the best habitats for young people to discover the wonders of nature. A backyard bird habitat can stimulate young people to develop a lifelong interest in wildlife and conservation.

Basics of Landscaping for Birds

Landscaping for birds involves nine basic principles:

Food

Every bird species has its own unique food requirements that may change as the seasons change. Learn the food habits of the birds you wish to attract. Then plant the appropriate trees, shrubs, and flowers to provide the fruits, berries, seeds, acorns, and nectar.

Water

You may be able to double the number of bird species in your yard by providing a source of water. A frog pond, water garden, or bird bath will get lots of bird use, especially if the water is dripping, splashing or moving.

Shelter

Birds need places where they can hide from predators and escape from severe weather. Trees (including dead ones), shrubs, tall grass and bird houses provide excellent shelter.

Diversity

The best landscaping plan is one that includes a variety of native plants. This helps attract the most bird species.

Four Seasons

Give birds food and shelter throughout the year by planting a variety of trees, shrubs and flowers that provide year-round benefits.

Arrangement

Properly arrange the different habitat components in your yard. Consider the effects of prevailing winds (and snow drifting) so your yard will be protected from harsh winter weather.

Protection

Birds should be protected from unnecessary mortality. When choosing the placement of bird feeders and nest boxes, consider their accessibility to predators. Picture windows can also be dangerous for birds, who fly directly at windows when they see the reflection of trees and shrubs. A network of parallel, vertical strings spaced 4 inches apart can be placed on the outside of windows to prevent this problem. Be cautious about the kinds of herbicides and pesticides used in your yard. Apply them only when necessary and strictly according to label instructions. In fact, try gardening and lawn care without using pesticides. Details can be found in gardening books at the library.

Hardiness Zones

When considering plants not native to your area, consult a plant hardiness zone map, found in most garden catalogues. Make sure the plants you want are rated for the winter hardiness zone classification of your area.

Soils and Topography

Consult your local garden center, university or county extension office to have your soil tested. Plant species are often adapted to certain types of soils. If you know what type of soil you have, you can identify the types of plants that will grow best in your yard.

Plants for Wild Birds

Seven types of plants are important as bird habitat:

Conifers

Conifers are evergreen trees and shrubs that include pines, spruces, firs, arborvitae, junipers, cedars, and yews. These plants are important as escape cover, winter shelter and summer nesting sites. Some also provide sap, fruits and seeds.

Grasses and Legumes

Grasses and legumes can provide cover for ground nesting birds-but only if the area is not mowed during the nesting season. Some grasses and legumes provide seeds as well. Native prairie grasses are becoming increasingly popular for landscaping purposes.

Nectar-producing Plants

Nectar-producing plants are very popular for attracting hummingbirds and orioles. Flowers with tubular red corollas are especially attractive to hummingbirds. Other trees, shrubs, vines and flowers also can provide nectar for hummingbirds.

Summer-fruiting Plants

This category includes plants that produce fruits or berries from May through August. In the summer these plants can attract brown thrashers, catbirds, robins, thrushes, waxwings, woodpeckers, orioles, cardinals, towhees and grosbeaks. Examples of summer-fruiting plants are various species of cherry, chokecherry, honeysuckle, raspberry, serviceberry, blackberry, blueberry, grape, mulberry, plum and elderberry

Fall-fruiting Plants

This landscape component includes shrubs and vines whose fruits ripen in the fall. These foods are important both for migratory birds which build up fat reserves before migration and as a food source for nonmigratory species that need to enter the winter season in good physical condition. Fall-fruiting plants include dogwoods, mountain ash, winter-berries, cottoneasters and buffalo-berries.

Winter-fruiting Plants

Winter-fruiting plants are those whose fruits remain attached to the plants long after they first become ripe in the fall. Many are not palatable until they have frozen and thawed many times. Examples are glossy black chokecherry, Siberian and "red splendor" crabapple, snowberry, bittersweet, sumacs, American highbush cranberry, eastern and European wahoo, Virginia creeper, and Chinaberry

Nut and Acorn Plants

These include oaks, hickories, buckeyes, chestnuts, butternuts, walnuts and hazels. A variety of birds, such as jays, woodpeckers and titmice, eat the meats of broken nuts and acorns. These plants also contribute to good nesting habitat.

How to Get Started

Think of this project as landscaping for birds. Your goal will be to plant an assortment of trees, shrubs and flowers that will attract birds. If you plan carefully it can be inexpensive and fun for the whole family. The best way to get started is to follow these guidelines:

Set Your -Priorities

Decide what types of birds you wish to attract, then build your plan around the needs of those species. Talk to friends and neighbors to find out what kinds of birds frequent your area. Attend a local bird club meeting and talk to local birdwatchers about how they have attracted birds to their yards.

Use Native Plants When Possible

Check with the botany department of a nearby college or university or with your state's natural heritage program for lists of trees, shrubs, and wildflowers native to your area. Use this list as a starting point for your landscape plan. These plants are naturally adapted to the climate of your area and are a good long-term investment. Many native plants are both beautiful for landscaping purposes and excellent for birds. If you include normative plant species in your plan, be sure they are not considered "invasive pests" by plant experts. Check out the bird books in your local library

Draw a Map of Your Property

Draw a map of your property to scale using graph paper. Identify buildings, sidewalks, power lines, buried cables, fences, septic tank fields, trees, shrubs and patios. Consider how your plan relates to your neighbor's property-will the tree you plant shade out the neighbor's vegetable garden? Identify and map sunny or shady sites, low or wet sites, sandy sites, and native plants that will be left in place.

Get Your Soil Tested

Get your soil tested by your local garden center, county extension agent or soil conservation service. Find out what kinds of soil you have and then find out if your soils have nutrient or organic deficiencies that fertilization or addition of compost can correct. The soils you have will help determine the plants which can be included in your landscaping plan.

Review the Seven Plant Habitat Components

Review the seven plant components described previously. Which components are already present? Which ones are missing? Remember that you are trying to provide food and cover through all four seasons. Develop a list of plants that you think will provide the missing habitat components.

Talk to Resource Experts

Review this plant list with landscaping resource experts who can match your ideas with your soil types, soil drainage and the plants available through state or private- nurseries. People at the nearby arboretum can help with your selections. At an arboretum you can also see what many plants look like. Talk with local bird clubs, the members of which probably are knowledgeable about landscaping for birds.

Develop Your Planting Plan

Sketch on your map the plants you wish to add. Draw trees to a scale that represents three-fourths of their mature width, and shrubs at their full mature width. This will help you calculate how many trees and shrubs you need. There is a tendency to include so many trees that eventually your yard will be mostly shaded. Be sure to leave open sunny sites where flowers and shrubs can thrive. Decide how much money you can spend and the time span of your project. Don't try to do too much at once. You might try a five-year development plan.

Implement Your Plan

Finally, go to it! Begin your plantings and include your entire family so they can all feel they are helping wildlife. Document your plantings on paper and by photographs. Try taking pictures of your yard from the same spots every year to document the growth of your plants.

Maintain Your Plan

Keep your new trees, shrubs and flowers adequately watered, and keep your planting areas weed-free by use of landscaping film and wood chips or shredded bark mulch. This avoids the use of herbicides for weed control. If problems develop with your plants, consult a local nursery, garden center or county extension agent.

And Finally ...

Make sure to take the time to enjoy the wildlife that will eventually respond to your landscaping efforts.
