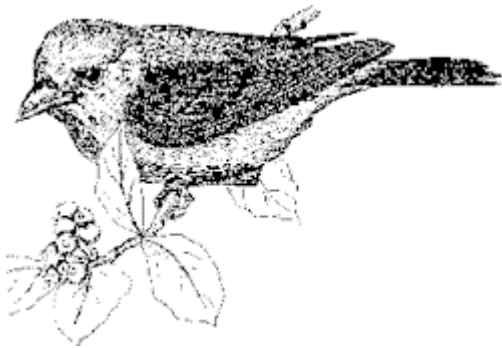


BayScapes for Wildlife Habitat - A Homeowner's Guide

BayScapes are environmentally sound landscapes benefiting people, wildlife and Chesapeake Bay. BayScaping advocates a "holistic" approach through principles inspired by the relationships found in the natural world.



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How do BayScapes help wildlife?

Forests and open spaces are rapidly giving way to development, to accommodate a growing number of people in the Bay watershed. Whether converted to businesses, shopping malls or houses, the results remain the same: natural habitat is destroyed and species diversity is lost.

Habitat refers to the food, water, cover and nesting sites all living creatures need to survive. Like humans, each animal has habitat preferences.

Through BayScaping, we can restore wildlife habitat in small pockets, one backyard at a time. Together, these backyard pockets join to form greenways,

safe havens in which animals can live and move. And by using a variety of beneficial plants, BayScapes attract a wider range of wildlife. These wildlife corridors are most important where large expanses of similar vegetation-such as a row of lawns in a subdivision-leave animals vulnerable to predators, or where exotic plants like kudzu have upset the balance of native vegetation.

How can I provide food and cover for wildlife?

As stewards of the land, we can provide food and cover for wildlife by planting trees, shrubs and ground covers. Such plantings supplement the natural habitat-the forests, fence rows, hedges and meadows-that animals require for protection, breeding and nesting. Existing vegetation can be supplemented with artificial nesting boxes and platforms. Even small areas can be enhanced for wildlife through the use of container gardens on porches and balconies, box gardens on window sills, and vertical gardens along fences and walls. Water is critical to the survival of all creatures. A pond, bird bath or shallow dish provides an essential watering hole and rest stop for birds and small mammals, as well as a focal point for landscaping.

Trees

Trees that produce edible and nutritious nuts, seeds or fruit especially benefit wildlife. Mammals, birds, reptiles, amphibians and insects nest and hibernate in cavities of larger trees during cold weather. Even young trees offer much-needed resting spots for migrating birds.

An array of birds, from orioles to warblers and flycatchers, feed on the millions of caterpillars and other insects hatching in the treetops each spring as the leaves emerge. These birds, known as neotropical migrants, nest throughout North America and winter in Mexico and Central America. They depend upon large blocks of undisturbed forest and continuous tree corridors, or greenways, for their survival.

Trees are classified as evergreen (such as cedars) and deciduous (such as oaks that lose their leaves each fall). Because they retain their leaves year round, evergreens-including pines, firs, spruces, cedars, hemlocks and hollies-provide excellent winter food and cover.

Evergreens that bear cones are called conifers. Their tiny seeds and needles are favored by titmice, chickadees and some finches. Junipers and cedars produce nutritious berries, eaten by cedar waxwings and purple finches, while robins, sparrows and mockingbirds nest in them. Pines provide favorite nesting sites for mourning doves and roosting places for robins.

Some familiar deciduous trees in the Bay watershed that provide food and nesting sites include the black cherry, red mulberry, red maple, sugar maple, river birch, flowering dogwood, American beech, black gum and many oaks.

The acorns produced by oaks provide a reliable, abundant food source. Squirrels, chipmunks, raccoons, foxes, wood ducks, mallards, quail, blue jays and woodpeckers enjoy acorns during fall and winter when other food is scarce. Other varieties of nut-producing trees important to wildlife friends include hickories, walnuts, hazelnuts and beeches. Fruit-bearers like the wild cherry and holly attract wildlife too.

To lure a variety of animals, plant different kinds of trees, including evergreens. Group different trees together to provide a rich base of food, nesting materials and nesting sites. Create an edge effect by alternating trees of varying shapes

and sizes. Some trees, for instance, have a large bare trunk and bushy crown, while others have many low branches and a thinner top. Consider the time required for a tree to mature, and plant both fast- and slow-growing species together. Trees that mature quickly include the white pine and red maple. Oaks and hickories grow more slowly.

Transition zones

A transition zone is composed of a variety of plant species that differ in height. Planted between a lawn and wooded area, for instance, an assortment of small trees, high- and low-growing shrubs, and low ground covers offers varying food and habitat in a concentrated area, while creating a layered effect. To maximize the benefits of the zone, each layer must be maintained. Trees, especially fruit-bearers, should be pruned to ensure fruit production and prevent shading out of other, smaller species. Shrubs should be pruned annually to maintain their size and shape.

Bushes and shrubs

Many wildlife species, including foxes, deer, squirrels, raccoons, field mice and songbirds, rely on evergreen and deciduous berry-producing shrubs. Bushes offer shelter and a quick get-away for frightened birds and small mammals, and their dense branches make excellent nesting sites for cardinals and mockingbirds.

Good winter food sources include the northern bayberry, eastern red cedar,

juniper, holly and staghorn sumac. Spring and summer fruits include the chokecherry, high bush blueberry and wild plum. For autumn foods, plant dogwood, winterberry, bearberry, arrow wood, cottoneaster and elderberry. Of course some berry producers, like blueberries and raspberries, are not only valuable to wildlife friends, but tasty and safe for people too.

Artificial boxes

Birds and mammals that usually nest in cavities of mature trees may nest in boxes if available. Owls, bluebirds, wrens, purple martins and swallows are just a few.

Bats consume pesky insects like mosquitoes that abound in the streams and marshes of the Bay region. Specially designed bat boxes erected on buildings and trees will attract these beneficial mammals to your backyard. Bats roost inside during the day and perch on the eaves at dusk to feed on flying insects. Check with your local library or garden center for good books that explain how to build and maintain these backyard homes.

Water

Water for both drinking and bathing is essential to wildlife. Unfortunately, it is often the most overlooked landscape component. Natural water sources continue to rapidly disappear in the cities and suburbs around Chesapeake Bay, and you can provide this critical habitat need in a number of creative ways.

A bird bath placed near shrubs or trees provides safe drinking and bathing for many bird species. Even a shallow pan filled with 2 inches or less of water is an excellent drinking source. Placed on the ground, these artificial ponds attract small mammals like squirrels and chipmunks. A jar lid of water attracts butterflies, who usually drink from puddles or tiny depressions in logs. Cup-shaped plants and flowers catch rainwater for other thirsty insects.

Remember to replace water regularly, especially during summer months. During the winter, keep watering holes ice-free. Provide cover nearby so visitors can make a quick get-away.

What about meadows?

A meadow does not simply consist of grasses left unmowed. It is a grassland community composed of grasses, wildflowers and legumes. Meadow plants, which are the first to colonize a cleared forest or farm field left unplowed, slowly give way to a succession of shrubs and trees.

The rich diversity of flowers, seeds and insects found in a meadow attracts a variety of birds and small mammals. Grasshoppers, for instance, attract birds like the American kestrel, the smallest and most colorful falcon in North America. Meadows also attract mammals ranging in size from field mice to deer. Birds such as quail, meadowlark and a variety of sparrows nest and forage here.

Wildflowers bring in the wildlife. They add a splash of color to your landscape and rival traditional ornamental flowers in beauty. The nectar of wildflowers is an important food source for honeybees, butterflies and hummingbirds that rapidly burn carbohydrates during flight. These nectar feeders, in turn, ensure

plant reproduction through the transfer of pollen.

Butterflies

If you want to lure these colorful dancing visitors, plant your wildflower meadow in a sunny spot protected from the wind. Flower shape, color, fragrance and time of bloom should all be considered when selecting plants because butterflies recognize color and seem to prefer intensely sweet scents over delicate ones.

Since plants flower at different times of the year, include a variety in your meadow so butterflies have access to blossoms throughout the growing season. Creating a meadow with a diversity of wildflowers will attract many butterfly species while providing colorful blooms from March until October. Include plants and herbs such as alfalfa, red clover, parsley, fennel, dill and butterfly weed which make up an important part of the butterfly's caterpillar stage diet.

The fragrant flowers of lilac bushes draw butterflies easily. The cluster of tiny flowers may be favored because butterflies can perch and feed from one flower to another without leaving the cluster. Also, since composite flowers are very hardy, they provide a stronger foundation in the landscape.

Butterfly weed, named for its ability to attract butterflies, is a tall, fragrant plant with large clusters of small flowers varying in color from brilliant orange to yellow or red. The black and orange Monarch butterfly looks for butterfly weed as its preferred food source.

Another common butterfly plant, Queen Anne's lace, sports a large flat flower

head of many tiny white flowers. Other excellent butterfly plants include aster, purple cone flower, black-eyed susan, goldenrod, milkweed, Joe-pyeweed and yarrow.

A meadow or wildflower garden may require a few seasons to become



established, so start small. In some areas, county or local zoning offices and community associations regulate lawn height and weedy plants. Make sure your meadow plan complies with all regulations for your particular area by checking with your local planning and zoning office. And if your community has open spaces or common areas, suggest that they be planted in meadow to enhance wildlife habitat.

Hummingbirds

Hummingbirds feed on the nectar of flowers and insects, which they often catch in mid-air. The smallest of bird species, these tiny aerial acrobats are fun and fascinating to watch. Hummingbirds use up extraordinary amounts of energy for their size and require lots of food at frequent intervals to support their flight habits. For example, the male Ruby-throated Hummingbird (the only hummingbird species east of the Mississippi) will beat his wings up to 70 times a second in a typical visit to your garden.

Tubular-shaped, red flowers are especially enticing to hummingbirds. Plant trumpet vine, scarlet sage, morning glory, coral bells, bee balm and cardinal flower to lure hummers to your backyard, or hang a feeder near your wildflower garden. Fill a commercial feeder with a mixture of four parts water (boil first) to

one part sugar. Clean and refill weekly.

How will BayScapes benefit me and the Bay?

Attracting wildlife turns your yard into a miniature natural area-an outdoor classroom for learning about nature. By selecting plants well-suited to your location, you'll cut the amount of time and money needed to maintain your yard and have more hours to enjoy the wildlife you attract. And because they need less water, fertilizers and pesticides to grow, BayScapes plants reduce the risk of pollutants entering the waters of Chesapeake Bay.

Suggested reading list

Martin, Alexander C., Herbert S. Zim and Arnold L. Nelson. *American Wildlife and Plants: A Guide to Wildlife Food Habits*. New York: Dover Publications, Inc., 1951.

Schneck, Marcus. *Your Backyard Wildlife Garden*. Emmaus, Penn.: Rodale Press, 1992.

Harrison, George H. *The Backyard Bird Watcher*. New York: Simon & Shuster, 1979.

McKinley, Michael D. *How to Attract Birds*. San Francisco: Ortho Books, 1983.

Tekulsky, Mathew. *The Butterfly Garden*. Boston: Harvard Common Press, 1985.

Xerces Society and Smithsonian Institution, eds. *Butterfly Gardening*. San Francisco: Sierra Club Books and the National Wildlife Federation, 1990.

Conant, Roger. *A Field Guide to Reptiles and Amphibians of Eastern and Central North America*. Boston: Houghton Mifflin Company, 1975.

Merilees, Bill. *Attracting Backyard Wildlife*. Stillwater, Minn.: Voyageur Press, 1989.

Phillips, Harry R. *Growing and Propagating Wild Flowers*. Chapel Hill: The University of North Carolina Press, 1985.

Sawyers, Claire E. and Barbara B. Pesch, eds. *Gardening with Wildflowers and Native Plants*. Handbook #119. Brooklyn: Brooklyn Botanic Garden, Inc., 1989.

For More Information

For detailed instructions for the safe use of fertilizers and pesticides in your community, contact your local or area Cooperative Extension office. The Cooperative Extension is a service of the land-grant university systems in the District of Columbia, Maryland, Pennsylvania and Virginia.

BayScapes is an environmental education initiative developed by the Alliance for the Chesapeake Bay and the U.S. Fish and Wildlife Service, Chesapeake Bay Field Office.

For more information on BayScapes, contact:

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