



NAPPC FACT SHEET

Wildlife, Pollinators, and the Products of Pollination



HABITATS: NATIVE PLANTS & WILDLIFE OF THE CHESAPEAKE BAY WATERSHED

The Chesapeake Bay Watershed (CBW) spreads over parts of six states, including Delaware, Maryland, New York, Pennsylvania, Virginia, West Virginia and the entire District of Columbia, forming the largest estuary in the United States. It supports over 3600 species of plants and animals, providing wetland stopovers for waterfowl, fresh and saltwater habitats for fish, and forest and grassland habitat for birds and mammals.

The U.S. Fish & Wildlife Service has identified over 369 species of native plants within the CBW, including 183 herbaceous plants, 68 shrubs, 28 herbaceous emergents, 78 trees, and 12 vines. Wildlife inhabiting the CBW rely on nearly 60% of these native floral resources especially for the leaves, roots, nuts, seeds, fruit, pollen, nectar and other food resources they provide - thanks to the reproductive services of the pollinators that visit them. Native plants are also important for shelter, nesting, perching, and other habitat uses.



Did you know?

Over 80% of all flowering plants rely on animal-assisted pollination in order to reproduce.

Animal pollinators are an essential part of the CBW and most of the world's other ecosystems, because they assist native plants in the transfer of pollen from flower to flower. This pollination service greatly increases the reproductive success of each plant, and is important for the proper development of seeds and fruits. The products of pollination – plant foliage, nuts, seeds, fruits, roots, and stems – are in turn utilized by many species of wildlife throughout their lifetimes and are fundamental to their survival in native habitats. Mammals, birds, and even some species of fish assist the plants they consume by dispersing plant seeds throughout a greater area than would be possible without them.

Did you know?

North America is home to over 4000 species of native bees, the majority of which are solitary and nest in the ground, small cavities, or hollow twigs.

Shrubs are the most important type of native plant for local wildlife in the CBW, with 93% of the species being used by small mammals and birds. Some of the most valuable species of shrubs provide nutritious berries such as: Black Huckleberry (*Gaylussacia baccata*), Dangleberry (*Gaylussacia frondosa*), Common Elderberry (*Sambucus nigra*) – consumed by 48 species of birds, Northern Bayberry (*Morella pensylvanica*) – with waxy berries that provide food through the winter, Allegheny Blackberry (*Rubus allegheniensis*) – a great nectar and pollen resource for butterflies and beneficial insects, Inkberry (*Ilex glabra*), Purple Flowering Raspberry (*Rubus odoratus*), blueberries (*Vaccinium* spp.), and sumacs (*Rhus* spp.).



Did you know?

Many botanical remedies and pharmaceutical products are developed using extracts from animal-pollinated plants.

Trees are the second most important group of native plants for wildlife in the CBW, with 87% utilized by wildlife populations in the area. Species of particular value to wildlife include Maple (*Acer* spp.), Birch (*Betula* spp.), Oak (*Quercus* spp.); each of which produces high-energy, nutritional seeds or nuts.

Some native tree species are good nectar and pollen sources for pollinators, in addition to providing food from the subsequent fruit development. The Sugarberry tree (*Celtis occidentalis*) for example, produces berries for songbirds and other wildlife and also serves as a larval host for butterflies. The flowers of the Pagoda Dogwood (*Cornus alternifolia*) attract a variety of pollinators, while the berries produced by that pollination service provide sustenance to 64 species of wildlife, including 43 bird species.



Neotropical migrant birds depend on fruit resources along their migration routes through the CBW, including pollinator-friendly trees such as Flowering Dogwood (*Cornus florida*), American Crabapple (*Malus coronaria*), Wild Cherry (*Prunus serotina*), and Common Persimmon (*Diospyros virginiana*). The Downy Serviceberry (*Amelanchier arborea*) provides ample flowers and pollen resources to attract pollinators, and is used by 58 species of wildlife, including 35 bird species that rely upon its fleshy fruits as a vital early summer food. Black Willow (*Salix nigra*) is a preferred food for Ruffed Grouse (*Bonasa umbellus*) and Pine Grosbeak (*Pinicola enucleator*).

Did you know?

Although bees are famous for being very proficient pollinators, beetles actually comprise the largest group of pollinating insects.



Vines are also important to wildlife, with 58% of the native species used by local fauna. Native vines good for wildlife and pollinators include: Trumpet Honeysuckle (*Lonicera sempervirens*), Passionflower (*Passiflora incarnata*), Crossvine (*Bignonia capreolata*), Virginia Creeper (*Parthenocissus quinquefolia*), American Bittersweet, Smooth Carrion Flower, and Trumpet Creeper (*Campsis radicans*) – which is a particularly significant nectar resource throughout the range of the Ruby-throated hummingbird.

Virginia Creeper berries are eaten by a variety of animals, including: Eastern Bluebird (*Sialia sialis*), Northern Cardinal (*Cardinalis cardinalis*), Carolina Chickadee (*Parus carolinensis*), Downy and Pileated Woodpeckers (*Picoides pubescens* and *Dryocopus pileatus*), Wild Turkey (*Meleagris gallopavo*), Great Crested Flycatcher (*Myiarchus crinitus*), Striped Skunk (*Mephitis mephitis*), White-tailed Deer (*Odocoileus virginianus*), White-footed Mouse (*Peromyscus leucopus*), Red Fox (*Vulpes vulpes*), and Eastern Cottontail (*Sylvilagus floridanus*). Caterpillars of the Giant Leopard Moth (*Ecpantheria scribonia*) consume the leaves. The Polyphemus Moth (*Anthera polyphemus*), American Toad (*Bufo americanus*), Red-backed Salamander (*Plethodon cinereus*), Wood Frog (*Rana sylvatica*), Eastern Newt (*Notophthalmus viridescens*), and several species of spiders and beetles use the foliage of Virginia creeper as shelter, and may be responsible for assisting in pollination as they move from plant to plant.



Did you know?

More than half of the world's diet of fats and oils come from oilseed crops including cotton, oil palm, canola and sunflower - which are pollinated by animals.

Herbaceous emergents are a small group of native plants in the CBW, yet 57% of the 28 species provide food for wildlife, especially for waterfowl and small mammals. Some of the pollinated species include the blue flags (*Iris* spp.), water lilies (*Nuphar lutea* and *Nymphaea odorata*), Arrowhead (*Sagittaria latifolia*), and Pickerelweed (*Pontederia cordata*) – which also attracts beneficial insects.

Herbaceous plants are the largest group of native plants in the CBW (183 species), with 36% of these used as food for wildlife. Just a few of the herbaceous plant genera indispensable to both wildlife (especially songbirds!) AND pollinators include: Joe pye weed (*Eupatorium* spp.), coneflowers (*Rudbeckia* spp.), goldenrods (*Solidago* spp.), *Oenothera* spp., and sunflowers (*Helianthus* spp.). The Maryland Wild Senna (*Senna marilandica*) is an important food source for upland gamebirds. Virtually all species of native herbaceous plant in the CBW invite incalculable quantities of butterflies and other pollinators to visit their abundant pollen and nectar resources by displaying attractive, brightly colored flowers.

Did you know?

The United States Department of Agriculture reports that 1000 of the 1330 crop plants cultivated worldwide for human consumption depend directly on animal pollinators.



Wildlife, like humans and so many other species on the planet, depend greatly on animal pollinators to assist plants in reproducing the leaves, roots, bulbs, fruits, seeds, and nuts upon which we all rely for our food and survival. Without pollinators, would wildlife even exist? Would we? Many native plants and wildlife are threatened by non-native organisms, which invade their habitats and out-compete with them for resources. We can help to reverse this negative trend by helping to protect and increase the number of pollinators that help to propagate native plants and the food, shelter, and habitat they provide for wildlife. Protecting pollinators and the essential services they offer to the food web is an important step towards ensuring not only the future of native flora and fauna across the globe, but our own future as well.

References:

Slattery, Britt E., Kathryn Reshetiloff, and Susan M. Zwicker. 2003. Native Plants for Wildlife Habitat and Conservation Landscaping: Chesapeake Bay Watershed. U.S. Fish & Wildlife Service, Chesapeake Bay Field Office, Annapolis, MD. 82 pp.

Virginia Creeper - Study of Northern Virginia Ecology website. 2004. Stratford Landing Elementary School, Fairfax County Public Schools. Mark Moran, web curator. Mark.moran@fcps.edu. http://www.fcps.k12.va.us/StratfordLandingES/Ecology/mpages/virginia_creeper.htm.

Chesapeake Bay image: <http://www.chesapeakebay.net/about.htm>.

**For more information about how to help pollinators or to make a tax-deductible contribution for pollinator protection, please contact us at:
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