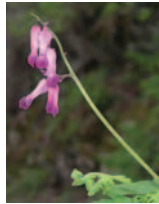




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SPRING



“THE WINTER WIND has lost much of its cutting edge,” wrote naturalist John Madson about the midwestern spring. “From then until hard frost, there will be no time when the prairiescape is not enameled with flowers of some kind. From the first pasqueflowers of March to the towering sunflowers of October, the tallgrass prairie will never be without flowers.”¹ March brings the first pasqueflowers, but for another twentieth-century nature lover, Patricia Duncan, “the month of May is the apex of the spring prairie. Green is taking over, bird song is taking over, and insects are taking over. Wildflowers such as golden alexanders, birdsfoot violets, prairie rose, spiderwort, purple milkweed . . . are taking over.”² Midwestern spring flowers had nineteenth-century admirers, too. “The earth in the woods is covered with May-apples not yet ripe, and in the enclosed prairies with large fine strawberries, now in their perfection.” Also beautiful are “the red lily, and the painted cup, a large scarlet flower,”³ wrote William Cullen Bryant. Visiting Illinois to be with her sister, Eliza W. Farnham wrote, “The landscape grows more beautiful every day. The prairie puts on its richest garb about the first of June. The painted cup, moccasin flower, and geranium, come out.”⁴ Observing spring while touring the Great Lakes in 1843, Sarah Margaret Fuller wrote, “In the wood grew not only the flowers I had before seen, and wealth of tall wild roses, but the splendid blue spiderwort, that ornament of our gardens,” and the “most delicate flowers,” including “a familiar love, the Scottish harebell, the gentlest, and most touching form of the flower-world.”⁵

After our long winters, midwesterners look forward to beautiful spring flowers. It’s too bad that many commercial garden centers, catalogs, and public displays of spring flowers feature ornamental plants from Europe and elsewhere. Native spring flowers are just as beautiful, and their nectar attracts bees and butterflies. Midwestern



Left: American redstart (*Setophaga ruticilla*)
Center: Yellow warbler (*Dendroica petechia*)
Right: Common yellowthroat (*Geothlypis trichas*)

wildflowers also play an essential role in butterfly reproduction, because these insects lay their eggs only on host plants that the caterpillars, or larvae, can digest, which most often are native plants. Several fritillary butterfly species lay their eggs on or near native violets, sometimes when the host plant has already dried up. The parsnip, or black swallowtail, butterfly (*Papilio polyxenes*) and the Missouri or Ozark woodland swallowtail butterfly (*P. joanae*) lay their eggs on plants of the Carrot family, such as spring's golden alexanders (*Zizia* spp.). America's best-known butterfly, the milkweed or monarch butterfly (*Danaus plexippus*), lays her eggs on milkweeds (*Asclepias* spp.); the spring bloomers among them include blunt-leaved, green comet, and purple milkweed. As is typical of more than 90 percent of insects, most butterflies are restricted in their diets to native plants, because they "have not developed the enzymes" required to digest the leaves of nonnative plants.⁶

The Midwest's spectacular show of native spring flowers coincides with another extraordinary regional event. As northern birds, like the juncos (p. 000) that spend the winter in the Midwest, depart north for the summer, tiny, gorgeously colored warblers, robins, native sparrows, woodpeckers (p. 000), and hummingbirds fly in by the millions from winter homes as far away as South America. At the end of their long journeys, the migratory birds begin to reproduce and seek tiny insects and caterpillars to feed their young, as do cardinals, chickadees, and other year-round residents. For birds, the native spring flowers play an essential role: hosting a variety of insect caterpillars and attracting quantities of tiny insects.

Many early spring flowers are ephemeral, so they take advantage of available sunlight before it is blocked by leafed-out plants. This brief window of opportunity attracts pollinators. Frequent visitors include various bee species, some just emerging from their underground wintering quarters. Some bees, such as honeybees and bumblebees, are generalists. Others, like the tiny, solitary bees called oligoleges, are specialists. Codependency requires these insects to pollinate specific species/genera of flowers. If a population of specialist bees fails to locate its special flowers, it cannot

survive. The loss of one native bee population puts existing clumps of the bee-dependent flowers at risk.

Many insects contribute to the spring insect tapestry, but for native plants, none are more important than the ants. Wild ginger, blue cohosh, goldenseal, twinleaf, bloodroot, and trillium are some of the many native woodland spring flowers that depend on ants to distribute their seeds, and not on wind (as do some flowers and most grasses), because trees block the wind. The ants are attracted to the plant seed's edible fleshy protein-rich appendages, or *elaiosomes*, which they carry to their nests to eat later. "After the ants have consumed the elaiosomes, they take the seeds to their waste disposal site, and 'plant' them in this nutrient rich environment."⁷ Ants have been observed carrying wildflower seeds 30 feet away from a plant.⁸ Like bees, ants are an example of codependence, which benefits both parties and has existed since time immemorial. Wasps and mammals also perform this vital seed dispersing. Introduced nonnative ants may enter into or disrupt these mutualistic interactions between numerous plants and other insects.⁹

Another force disruptive to the mutualistic interactions between native plants, butterflies, and other insects is spring cleanup. Most homeowners give little thought to this modern-day ritual. We may notice that there seem to be fewer butterflies, fireflies, and birds around, but we rarely connect this circumstance to our gardening practices. Yet, the leaf litter that naturally mulches and fertilizes the soil holds insects in various stages of their lives. Removing these layers and/or covering them with sterilized mulch from the hardware store inhibit the growth of native woodland plants. It deprives robins, native sparrows, and other birds of insect food. It also deprives baby firefly or lightning bug (really beetle) larvae that live in the soil of the worms, snails, and slugs they eat, preventing their development into the adult fireflies that add magic to our summer evenings. Cutting host plants down too early kills the baby butterflies that overwintered as larvae or pupae. Gardeners who leave host plants in place through late spring help overwintering butterflies successfully reproduce. There is also the possibility of observing the emergence of adult butterflies that spent the winter there in their other stages of life. Leaving leaf litter intact enables gardeners to observe the robins, native sparrows (p. 000), and other spring migrants that search for dormant insects, worms, and other bugs. Natural leaf litter enhances the beauty of woodland wildflowers that grow in soils rich in natural mulch. Choosing native host plants and conducting suitably restrained spring cleanups, including not using pesticides, are easy techniques for gardeners who love butterflies, fireflies, and birds and hope to see them prosper.



American robin (*Turdus migratorius*)

White-throated sparrow (*Zonotrichia albicollis*)