

# INTRODUCTION



UNTIL RECENTLY, conventional gardening did not often include growing native flora, but today gardening with regional native plants and wildflowers is gaining popularity. There has been a “continued blurring of the distinction between wildflowers and garden plants.”<sup>1</sup> Today’s wealth of books and magazine articles on gardening with plants and wildflowers native to one’s particular geographical region demonstrate that native plant gardening is moving into the mainstream. Another indication of this is the abundance of native plant nurseries, mail-order and online native plant catalogs, and local native plant sales. Even large commercial garden centers are beginning to offer limited selections.

So, what happened? The increasing popularity of native plants and wildflowers results from the congruence of a number of circumstances. “Historical literature suggests that both gardening and restoration efforts are increasing because of strongly held cultural beliefs,” writes Linda McMahan, a horticultural historian. “Many of these beliefs reflect strong European cultural history, which is embedded in garden history in North America. These cultural traditions remain strong in the United States and lead to an increase in efforts to restore and cherish nature, especially to save disappearing wild places and species. Gardening with a restoration focus, such as for sustaining wildlife, will most likely continue as wilder areas continue to be converted to homes and managed landscapes.”<sup>2</sup> As the New England Wildflower Society points out, “Using native plants is the ultimate environmentally friendly garden practice.”<sup>3</sup>

Concern for the natural balance of habitats inspires ecologically oriented gardeners to grow native plants. As a result of mostly ignoring our native plants and flowers,

observes the Lady Bird Johnson Wildflower Center, almost 29 percent are at risk of becoming extinct. More than two hundred species have already vanished!<sup>4</sup> In the United States, the aster, cactus, pea, mustard, mint, mallow, bellflower, pink, snapdragon, and buckwheat families hold native species that are endangered.<sup>5</sup> We can help turn this around by planting native species in our gardens and landscapes. Doing this also facilitates intimacy with nature, which is one of the positive experiences that explain why nature lovers choose native plants. When it comes to trapping carbon dioxide, native midwestern flora excels. In response to our region's semiarid climate, prairie flowers and grasses have developed extremely deep moisture-seeking roots that trap, hold, and sequester carbon dioxide and pollutants.

Striking color, fragrance and beauty, a wide diversity of choices, and the availability of native species for every cultivation requirement are additional reasons to choose natives. Gardening with native midwestern plants perpetuates our region's unique natural heritage and creates a sense of place. Practicality also comes into play, because regional native plants have characteristics that translate into savings of time, energy, and money. When planted in the right place and established, native plants tend to be reliable, disease resistant, long-lived and healthy, and rarely need watering, replacing, or costly pesticides. From the business end, horticulturalists and plant purveyors are increasingly recognizing that natives have tremendous landscape and commercial potential.

Many gardeners would like to grow locally native plants, but some face a dilemma. They really like many characteristics of their beloved nonnative "old favorites." The solution is to select native alternatives. This book describes native plants and flowers that look similar to or exactly like many popular nonnative plants and have the same cultivation requirements. These days, purchasing native plants has become convenient, due to the abundance of native plant sellers (see "Selected Resources" in the bibliography). Still, there are concerns that can make modifying a garden seem daunting.

Despite fears to the contrary, gardening with native plants does not alienate the neighbors. There is concern about producing an unkempt, or "weedy," look, but that would depend on one's garden design. "The great variety of plants native to any region give gardeners options that work well in any type of garden design," states the Lady Bird Johnson Wildflower Center. This applies to formal structured gardens and informal gardens, as well as to native plant gardens that mimic natural landscapes. The center notes that regional natives "provide excellent choices for large commercial landscapes as well as residential gardens."<sup>6</sup>

Yet, flowers associated with natural areas cause some gardeners to hesitate. The idea of replacing a nonnative "old favorite," even with a look-alike native plant, sometimes evokes a sense of loss. The impression that imported plants are somehow superior to native plants influences some gardeners, especially when these plants are recommended by mainstream nurseries. Some gardeners enjoy acquiring the latest popular cultivar or overseas discovery and are reluctant to give it up. However, there is a similar satisfaction to be found in cultivating native plant species, some of which might otherwise face extirpation. Habitually gardening with familiar nonnative plants can make it difficult to visualize growing different, but equally beautiful, na-

tive plants. But the excellent results—reliability, positive emotions, beauty, fragrance, and butterflies and birds—of planting native replacements generally outweigh lingering apprehensions.

How quickly to proceed is up to the individual gardener. Substituting native plants for nonnative plants need not require a drastic overhaul of a garden; gardeners can proceed gradually, replacing nonnative plants as they decline or die, or they can move at a faster pace. Some people opt to do it all themselves, whereas others employ professional native plant landscapers for all or parts of the transformation. Going at one's own pace is essential to achieving the most joyful and ultimately successful results.

To make the most of the benefits offered by native midwestern plants, use good landscape design and select plants that suit the site. Even a hardy native plant that is supremely adapted to one's region will not prosper if it is put in the wrong location. It takes the same effort and resources to establish nonnative plants as native plants, because, when newly planted, all plants require extra care and watering to ensure initial root system development. Once established, though, native plants generally require far less supplemental care than nonnative species.<sup>7</sup>

Attracting birds and butterflies is a good incentive for gardening, but what are the best plants to attract butterflies? "Native plants are best because butterflies have adapted to using them over thousands of years,"<sup>8</sup> writes naturalist Thomas G. Barnes, a professor in the Department of Forestry at the University of Kentucky. True native plants don't include native-plant hybrids and cultivars, which "have been bred for showiness and may have lost much of their nectar and pollen characteristics," notes the Canadian Wildlife Federation. "Flowers which have been cultivated to have tightly bunched, frilly flowers also make it more difficult for insects to access their nectar."<sup>9</sup>

Some butterfly species, called "specialists," use only a single native plant species or a closely related group of species as a host and won't use plants brought in from other places. "Host plants" are invariably native plants. The monarch butterfly, a popular specialist, is a good example. She lays her eggs only on native milkweeds, the sole vegetation that the caterpillars or larvae eat and without which they starve. As with most host plants, milkweeds do double duty, enabling monarch butterfly reproduction and providing nectar that attracts many species of adult butterflies, as well as hummingbirds and bees. The fragrant and beautiful "common" milkweed is known to attract forty-two butterfly species. Twenty species visit swamp or red milkweed; an additional nine are attracted to butterfly weed. This sounds like a lot of butterflies; however, the number-one butterfly-attracting flowers are the native dogbanes. "More than 43 species of butterflies have been observed feeding on this plant,"<sup>10</sup> observes Barnes. "There just aren't many nonnative plant species that butterflies seek out for nectar or as a host,"<sup>11</sup> writes Dave Parshall, author, photographer, and longtime president of the Ohio Lepidopterists Society. Native bees need help, too, and "research shows native plants are four times more attractive to native bees and butterflies than exotics."<sup>12</sup>

Bird lovers are interested in plants that attract and sustain birds. "Native plants, which have co-evolved with native wild birds, are more likely to provide a mix of

foods—just the right size and with just the right kind of nutrition—and just when the birds need them,”<sup>13</sup> states the National Audubon Society. This means, as Mariette Nowak put it in the Midwest-based *Wild Ones Journal*, regardless of the size of your yard, you can help reverse the loss of bird habitat by planting the native plants upon which our birds depend and be “rewarded with a bounty of birds and natural beauty just beyond your doorstep.”<sup>14</sup> Because birds fly from place to place, “even small ‘islands’ of habitat can provide food resources to birds, particularly during migration.”<sup>15</sup>

When it comes to nesting birds, the importance of native plants cannot be overstated. Almost all North American birds other than seabirds—96 percent—feed their young insects, so if the insects are eliminated, so are future generations of birds. Even nectar-loving hummingbirds feed insects to their offspring, although goldfinches and doves are an exception; they feed their nestlings regurgitated seeds. Ecologist/entomologist Douglas W. Tallamy compared native plants and alien plants in terms of their production of caterpillar-stage insects eaten by insectivorous birds. “The native plants in the study supported a whopping 35 times more caterpillar biomass than the aliens.”<sup>16</sup> Growing native plants is a meaningful way to encourage healthy populations of native birds and butterflies.

Garden columns offering advice about avoiding mistakes or attracting butterflies and birds sometimes suggest planting your neighbors’ tried and true “old favorites.” But, too often, the result is yet another garden or landscape dominated by nonnative plants, thus aggravating the problem of decreasing populations of native plants, butterflies, and birds. Another by-product of choosing nonnative plants that are often found in ornamental plantings and landscapes is that the nonnatives may be naturalized or invasive. “In fact, many non-native plants introduced for horticultural and agricultural use now pose a serious ecological threat,”<sup>17</sup> according to the Bugwood Network. There are economic implications as well: “The economic cost of invasive plants is estimated at more than \$34 billion per year, and the costs continue to grow.”<sup>18</sup>

There are nonnative plants that grew here for decades without becoming invasive, but a federal study determined that “the longer nonnative plants are sold commercially, the greater the chance they will become naturalized and potentially invasive.”<sup>19</sup> The rate of naturalization is hard to predict. “Many decades often pass between the first introduction of a plant and its eventual rapid spread. In other words, species that rarely spread today may turn out to be troublesome 40 years or more from now.”<sup>20</sup> Dame’s rocket (p. 000) is an instructive example. Many ecologists agree that “a foolproof system for predicting invasiveness has proven elusive.”<sup>21</sup> Putting regional native plants into mainstream use in our gardens and landscapes reduces the impact of nonnative invasive plants. The New England Wild Flower Society puts it this way: “By using native plants, we can avoid invasive plant species . . . that harm natural areas.”<sup>22</sup> For those who wish to avoid planting a potentially invasive nonnative plant, the Brooklyn Botanic Garden says, “the most prudent prevention measure is to choose a regionally native species.”<sup>23</sup>

Studies show that “most of the ornamental species in parks and gardens are alien, e.g., lawn grasses, rose bushes, lilacs. Therefore, with as many as . . . one-third of the

species in the flora foreign, they dominate the visual impact of the flora in much of middle North America.”<sup>24</sup> How did this begin? European settlers in North America felt threatened by the vast wilderness, and they missed their familiar, back-home shrubs, trees, and flowers. Because the native flowers were so plentiful, pioneers called them “common” or “weeds,” unflattering names that persist to this day. To satisfy their customers, colonial nurseries imported European plants, beginning the long-term trend of importing ornamentals. But today’s gardeners have the information, desire, and ability to reverse yesterday’s habits now that a wide selection of beautiful native plants and wildflowers is conveniently available from reliable commercial sources.

We’ve examined a range of well-documented reasons that Midwest gardeners are inspired to choose regionally native plants. Regardless of the motives that resonate with you most, we offer some great native choices within this book. For the best results, go at your own pace. Go beyond our suggestions. Develop your own ideas based on your research and observations. Extend the concept of replacing nonnative plants with natives to include nonnative trees and shrubs, window box plantings, rooftop gardens, and all planters. Share native plants with your friends and neighbors. Collect native-plant nursery catalogs and spend time dreaming about beautiful native plants and flowers, rather than the nonnative varieties. For landscapes and gardens large and small, our book can serve as a handy guide for choosing native midwestern flowers and plants.

## Environmental Reminder

Removing endangered plants from their natural environments increases their vulnerability. Removal also decreases survival chances for the beneficial insects, including butterflies, skippers, and bees, that depend on native plants for survival. Patronizing native purveyors (see “Selected Resources” in the bibliography) and sharing native plant bounty among friends, relatives, and neighbors are responsible ways to acquire native plants.