New Life in the Meadows

Meadow Management Focuses on Preserving Wildlife Habitat

Meghana Srinivasan, Marketing and Communications Specialist

Inhabiting the 281 acres of the Arnold Arboretum are over 15,000 accessioned woody plants, each with significant horticultural, scientific, and educational value. Careful planning and meticulous curation are involved with each of these plants, from planning their location on the grounds to determining what type of care they will need. Though this landscape’s design (originally developed by Frederick Law Olmsted) primarily serves the goals of cultivating and preserving our curated plant collections, it also has a wilder side. Scattered among the curated collections are several areas that grow in a more “natural” state: the Arboretum’s meadows.

In the meadows, grasses and other non-woody plants are allowed to grow to maturity, creating habitat for local wildlife as well as accentuating the landscape with natural flora. Some notably beautiful meadows include the wet meadow in front of the Hunnewell Building, the two meadows bordering the footpath going up Peter’s Hill, and the Weld Hill meadow, where bountiful lupine and goldenrod create a stunning backdrop for the LEED-certified research building. While the Arboretum takes a passive management approach with several grassy meadows throughout the landscape by reducing mowing to once or twice a year, several “natural” areas also receive intentional landscaping and cultivation.

In Kent Field—the grassy meadow that spreads out below the Conifer Collection—the Arboretum’s curation and horticulture teams selected a set of native wildflower species to plant that would attract a diverse array of pollinators and create a colorful accent to the scenery. In order to keep maintenance needs at a minimum, they chose species that thrive in full sun and can tolerate both saturated soils and drought, as well as resist herbivory. The four species that met the criteria were whorled milkweed (Asclepias verticillata), common boneset (Eupatorium perfoliatum), great blue lobelia (Lobelia siphilitica), and short-toothed mountain mint (Pycnanthemum muticum).

Visiting student interns from Norfolk Agricultural High School helped carry out the preparation and planting of the wildflowers. They mowed, trimmed, and tilled the beds, and then used rakes and shovels to manually remove the remaining roots and grassy material from the soil in order to minimize the amount of competition the new plants would have to face for resources. The interns then helped the Arboretum’s horticulture crew plant over 800 wildflower plugs in Kent Field, with beautiful as well as ecologically beneficial results. The blue and white flowers add visual interest to the grassy area and enhance the view of the Conifer Collection, and all four wildflower species are highly valued for attracting and sustaining pollinators. In particular, mountain mint and boneset dazzle with long bloom periods and abundant clusters of flowers, and are among the most effective pollinator plants in our region. The wildflower plantings and the area have become a hotspot for butterflies, bees, wasps, flies,
spiders, and praying mantises. Of notable value is the addition of whorled milkweed, which is a host plant for the threatened monarch butterfly.

Creating multiple types of habitats in the meadows supports a diverse range of wildlife and provides important benefits to the Arboretum’s animal residents. In addition to serving as overwintering sites for insects and small mammals, grassy meadows like the ones on Peter’s Hill offer nesting sites, shelter, and foraging areas for field sparrows, swallows, and other animals. Early morning visitors have even spotted deer foraging and resting in the cover of the tall grasses. In fact, the discovery of a pair of nesting bobolinks on Peter’s Hill prompted the designation of a “no-mow” area to increase the chances that the birds, rarely seen at the Arboretum, would successfully breed there. The meadow continues to provide habitat that supports an abundance of bird life including barn swallows, tree swallows, and red-tailed hawks.

In addition to supporting local populations of insects, birds, and mammals by expanding available habitat, meadows offer other benefits for the Arboretum community. The growth of grasses can help reduce erosion in watersheds, and curtailing mowing in these areas can help reduce carbon emissions and noise pollution. The natural-looking grassy areas offer stunning viewsheds in the landscape, creating visual contrast and highlighting various aspects of the topography. The contours of the “no-mow” areas form long, curving swaths of grassland that hark back to the Arboretum’s agricultural past and add a wilder, more natural feel for visitors to enjoy. As meadows generally exist in areas that are hard for landscaping equipment to reach, reducing mowing also allows the horticulture staff to focus their time and labor on caring for curated collections.

The goals and results of the Arboretum’s meadow management efforts have been inspiring for an institution historically committed not only to its collections, but also to its community. Going forward, the Arboretum plans to keep track of the occurrence of noteworthy species in the meadows, opening up possibilities for further study of the interactions between plants and other organisms in this diverse landscape.

From top: Common boneset (Eupatorium perfoliatum), great blue lobelia (Lobelia siphilitica), and short-toothed mountain mint (Pycnanthemum muticum) blooming in Kent Field. All photos by Pamela Thompson.