



New England Roadsides Can Support Pollinators



Pollinator Decline

Pollinators, including bees, butterflies, moths, flies, and beetles, play a vital role in the health of our ecosystems. They are required for the reproduction of over 75% of the world's plants and nearly 35% of global agricultural plants. Pollinators support the global agriculture industry by aiding in the production of fruits, vegetables, and nuts, thus contributing significantly to the world's food supply.

Pollinator populations are declining due to habitat loss, excessive pesticide use, climate change, and the spread of invasive species.



Roadside native plant community



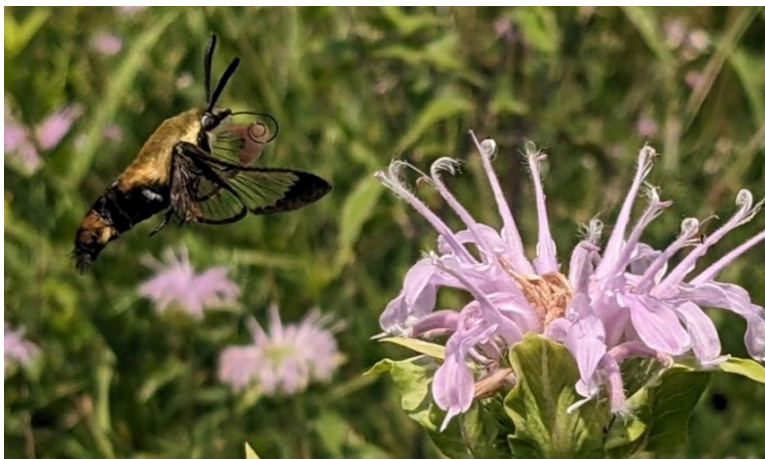
Eastern tailed-blue butterfly (*Cupido comyntas*)



Great spangled fritillary (*Argynnis cybele*)

Roadsides as Corridors

Roadsides, when properly managed, can serve as corridors for pollinators. These linear spaces along highways and secondary roads offer refuge and foraging habitats and connect fragmented landscapes. The vegetation provides important resources for pollinators, such as food, shelter, and breeding



Snowberry clearwing (*Hemaris diffinis*) with bee balm

Converting Turfgrass to Native Vegetation

Traditionally, roadsides have been planted with non-native cool season turfgrass because it provides quick establishment and more immediate erosion control while tolerating repetitive mowing.

State Departments of Transportation (DOTs) are adopting measures, such as reduced mowing, which allows for the growth of wildflowers and grasses. Often, roadsides already harbor a bank of dormant and suppressed native seeds and plant material that can generate growth. With the implementation of reduced mowing, roadsides can transition into beneficial habitats for pollinators. In addition, reduced mowing practices result in decreased emissions and savings for DOTs.

Planting native wildflowers and grasses amplifies benefits of roadside meadows, such as stormwater runoff filtration and carbon capture capabilities. Compared to turfgrass, native plants have deeper, more extensive root systems, allowing water percolation into the soil, which filters out runoff pollutants. Native plants take in carbon dioxide (CO₂) for photosynthesis through their leaves, converting the carbon into energy and storing it in plant parts.

Seasonal Changes of Roadside Vegetation in New England

As DOTs implement new roadside management practices, the appearance of the landscape will change. Roadsides will transition from traditionally short, mowed turfgrass to taller, less manicured landscapes featuring native grasses and wildflowers. This shift will be clearly visible along roadsides. Additionally, the increased height of the vegetation will highlight seasonal changes more prominently.

Spring

Roadside meadows come out of dormancy. Grasses begin to grow taller, and early native wildflowers are beginning to bloom. As the temperatures warm and pollinators become more active, these plants play a crucial role in providing nectar and pollen. In addition to wildflowers, trees and shrubs start to bloom as well.

Spring Blooming Native Wildflowers: lupine, iris, geranium, and beardtongue

Trees & Shrubs: dogwoods, willows, rhododendrons, and northern spicebush



Foxglove beardtongue (*Penstemon digitalis*)

Summer

Roadside meadows reach their peak flowering period with some species continuing to bloom through September.

Summer Blooming Native Wildflower: blue vervain, rudbeckia, evening primrose, bee balm, aster, Joe-Pye weed, ironweed, milkweed, and boneset.

Shrubs: viburnum, mountain laurel, meadowsweet, sweet pepperbush, buttonbush, and sumac



Joe-Pye weed (*Eutrochium maculatum*)

Autumn

As the growing season nears its end, plants divert their energy to seed production. The landscape changes from vibrant greens to muted neutrals, creating a backdrop of bare stems with seeds and dried grasses.

Pollinator activity starts to decrease, and many insects seek overwintering shelter. When roadsides are not mowed in the fall, the vegetation will provide shelter for overwintering insects and small animals.

Autumn Blooming Native Wildflowers: American witch hazel and various species of goldenrods and asters



Little bluestem (*Schizachyrium scoparium*)

Winter

During the winter season, the roadside meadow enters a phase of dormancy. Despite the outer appearance of brown and seemingly dead vegetation, some stems can be filled with life waiting for the arrival of spring. Numerous insects and other organisms rely on the dried stems and plant debris for shelter and protection from the cold.

Unmowed roadsides provide refuge for many wildlife species, aiding their survival.



Various dried grasses and wildflower stems