

Roadsides as Habitat for Pollinators: Frequently Asked Questions



How can roadsides be useful to pollinators?

Roadsides provide several ecological functions for pollinators, including serving as foraging habitat, providing breeding or nesting opportunities, and helping pollinators to move through landscapes by linking fragmented habitats. Not all roadsides are equally beneficial to pollinators. Roadsides with abundant wildflowers, predominately native plants, and managed by judicious mowing, herbicides, or other management tools provide the best roadside habitat. Although they are not a substitute for wildland habitat, as patches of refuge for pollinators in otherwise inhospitable landscapes, roadsides can contribute to the maintenance of healthy ecosystems and the provision of ecological services such as crop pollination.

(Sources: Dirig and Cryan 1991; Munguira and Thomas 1992; Ries et al. 2001; Saarinen et al. 2005; Hopwood 2008; Schaffers et al. 2012.)

Why use native plants, if they are more expensive than nonnative species?

There are many advantages of using native plants to stabilize roadsides. Native grasses and flowers are best adapted to local growing conditions, require minimal inputs for establishment, and are able to tolerate extreme weather events such as drought. The root systems of native plants can increase water infiltration, which reduces runoff and water pollution and keeps our waters cleaner. A diverse native plant community can reduce soil erosion and resist weed invasions, which can reduce maintenance costs. Although native plants may cost more upfront, they can provide cost savings over time. Native plants can be aesthetically pleas-



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For more information

Literature review of pollinators in rights-of-way:
<http://www.xerces.org/pollinator-conservation-roadsides/>

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ing during the growing season while also acting as snow fences in the winter, trapping and preventing snow from blowing across roads. Native plant communities also support more birds, pollinators, and other wildlife. The use of native plants in roadsides can provide ecological benefits to the surrounding landscape.

(Sources: Cramer 1991; Bugg et al. 1997; Harper-Lore and Wilson 2000; Johnson 2000; Ries et al. 2001; Quales 2003; Blumenthal et al. 2005; Tilman et al. 2006; Hopwood 2008; Tallamy and Shropshire 2009; Williams et al. 2011; Harrison 2014; Harper-Lore et al. 2014.)

Will any of the wildflowers planted on roadsides spread to my property and become weeds?

Native plants in roadsides are less likely than many non-native plants to become weed issues and encroach on adjacent land.

(Source: Harper-Lore and Wilson 2000.)

Are milkweeds present in the roadside a threat to livestock on adjacent land?

Milkweeds present in roadsides are unlikely to be a threat to livestock on adjacent property. Very few milkweeds will spread from their planting site. If milkweeds are present in pastures or rangelands, most livestock take great care to avoid them. Although milkweeds are toxic, they are highly unpalatable to livestock. Milkweed poisoning typically only occurs when livestock are confined to a barren paddock with no alternate food sources.

(Sources: Fulton 1972; Pfister et al. 2002; Borders and Lee-Mäder 2014.)

Are collisions with vehicles a major source of mortality for pollinators?

Hundreds of thousands of pollinators are killed by vehicles on roads, but, research suggests that the numbers are a small proportion of overall populations. Mortality rates of butterflies on roads, for example, range from 0.6% to a maximum of 10% of the population, depending on the species. Road mortality can be higher for some species of pollinators than others. For example, butterflies appear to be one of the more common groups of insects killed by cars. Some butterflies that are strong fliers have the ability to dodge vehicles, while other less adroit species are more susceptible.

(Sources: Munguira and Thomas 1992; McKenna et al. 2001; Ries et al. 2001; Rao and Girish 2007; Zielin et al. 2010; Skórka et al. 2013; Munoz et al. 2015.)

If the amount of wildflowers on roadsides increases, will the number of pollinators killed on roads increase too?

Although pollinators and other wildlife are going to be killed by vehicles as long as we have roads, there are ways to



Pollinator habitat next to speeding trucks does not significantly increase mortality of butterflies and bees. Photograph by Maria Urice, Living Roadway Trust Fund.

reduce pollinator road mortality. Reducing roadside mowing can reduce butterfly mortality, as can enhancing the diversity and abundance of wildflowers on roadsides. Current research suggests that, rather than luring pollinators to death-by-vehicle, roadsides with high quality habitat actually reduce pollinator mortality.

(Sources: Munguira and Thomas 1992; Ries et al. 2001; Skórka et al. 2013.)

If roadsides are mown less frequently, will this impact driver safety, especially collisions with deer?

Frequency of mowing of the entire roadside doesn't appear to influence rates of deer-vehicle crashes. In fact, deer may actually prefer some roadsides that are mowed more frequently because mowing can increase the palatability of some plants. A strip of vegetation adjacent to the pavement that is mown regularly, while letting the rest of the roadside grow to a reasonable height, can help to maintain visibility of drivers and prevent deer-vehicle crashes.

(Sources: Mastro et al. 2008; Barnum and Alt 2013; Guyton et al. 2014.)



Wildflowers growing on roadsides, such as in this prairie planting in Iowa, are unlikely to spread into adjacent property—and the mowed strip adjacent to the pavement improves vehicle visibility and safety. Photograph by Maria Urice, Living Roadway Trust Fund.

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