



## Massachusetts Butterfly Club

### MOWING GUIDELINES FOR FIELDS AND GRASSLANDS

The best practice, which will benefit the most species of butterflies, is to mow such areas no more than once year, in the late fall. Keep the mower height at least 4 to 6 inches off the ground, since larvae will be over-wintering near the ground at the base of plants, and leave the cuttings in place to decompose over the winter. If possible, mow with a sickle bar to minimize damage to overwintering life forms. At each mowing, it is important to leave some unmowed areas, even small ones, as “insect refugia.” A good way to accomplish this is mowing on a rotational basis, cutting only one-half or one-third of an area each year.

Mowing may not be appropriate for some land situations or for particular species of butterfly. Some native grasslands in Massachusetts, such as dry stands of Little Bluestem, sandplain grasslands near the coast, and native wet meadows, can sometimes maintain themselves naturally, and may not need mowing at all. Dry native grasslands provide habitat for uncommon species such as Cobweb, Dusted and Leonard’s Skippers. Native wet meadows are habitat for Harris’ Checkerspot, Baltimore Checkerspot, Silver-bordered Fritillary, and Bronze Copper. All colonies of these species should be protected. Mowing can be done around edges of meadows if shrubs are encroaching, and individual shrubs can be spot-treated. Other than these special areas, most meadows in New England will need mowing to keep them open.

Some butterfly species prefer to lay their eggs on fresh new leaf growth, and their larvae do best on such vegetation. For this reason species such as Monarch, Cabbage White, Common Sulphur and Orange Sulphur, which are agriculturally adapted, may actually benefit from a midsummer mowing in late July or August, since they are able to raise another brood before fall from newly sprouted milkweed, clover, and cresses. On the other hand, single-brooded species, including Baltimore Checkerspot, Harris’ Checkerspot, and some skippers, can be wiped out by a midsummer mowing. Whether and to what extent species such as Black Swallowtail, Pearl Crescent, Eastern Tailed-Blue, American Copper, and Little Wood-Satyr can tolerate both a midsummer and a fall mowing is unclear. Until more is known, the best practice is to do only a single late fall mowing.

Mowing in June, as is done in many fields managed for hay production, is very detrimental to butterflies, as well as other Lepidoptera and wildlife. Farming for hay production may keep fields open, but is not usually compatible with good management for butterflies. Mowing once in late fall, on the other hand, allows seeds of many

important host and nectar plants, such as Queen Anne's Lace, dock, turtlehead, Joe-Pye weed, milkweed, and asters, to mature and disperse, so that these beneficial plants spread.

Mowing once every year or two is usually necessary to allow low-growing host plants, such as violets for Fritillaries, lance-leaved plantain for Baltimores, and grasses for satyrs and skippers, to grow rather than being shaded out. Not mowing will encourage shrubs such as blueberry, bearberry, spirea, viburnums, dogwoods and clethra, along with saplings of beneficial trees such as black cherry, poplar, spicebush, sassafras, willow, oak, pine and juniper. These plants are hosts to another suite of butterflies and moths, such as Viceroy, Red-spotted Purple, Spicebush Swallowtail, elfins, and New England Buck Moth, and should also be encouraged. Shrubland is a declining habitat type, and very valuable in its own right, so landowners may want to manage some areas as shrubland, cutting them only every five to ten years. Shrub habitat should also be provided by maintaining "hedgerows" at the perimeter of fields and selectively removing invasives such as buckthorn, oriental bittersweet, and multiflora rose.

Whether one might want to plow and re-seed a piece of land depends on its land use history and what species of plants and butterflies are now present. If the land has never been disturbed or plowed—for example, it may have historically been used only for grazing, or woodcutting, or haying of native vegetation—plowing will be quite detrimental. Such disturbance destroys the pre-existing soil structure and its microorganisms, and creates the conditions in which some species, such as goldenrod, can become invasive. Native spring ephemeral wildflowers, which include woodland violets, lance-leaved violet, and bird-foot violet, the sole hosts for our Fritillary butterflies, are destroyed by plowing and are not able to recolonize old fields for 30 to 50 years, in part because their seeds are ant-dispersed and do not travel very far. If, on the other hand, the soil has already been disturbed for construction or for agriculture, and the area is not now good butterfly habitat, then plowing, liming and replanting with a native meadow mix would be an excellent thing to do.

For more information on Massachusetts butterflies and their conservation, see [www.massbutterflies.org](http://www.massbutterflies.org)

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