

Reuben Hoar Library Native Pollinators

75% of our flowering plants rely on pollinators, but many of our native pollinators are in decline



Bombus fervidus

- Pollinators include bees, butterflies, moths, wasps, flies and beetles
- New England has over 350 species of bees, including sweat bees, leaf cutter and mason bees, carpenter bees and bumblebees
- Metrowest has 2 at-risk bumblebees, the golden northern bumblebee and the half-black bumblebee

Check out *Littleton's Natural Resources* on the Conservation webpage
<https://www.littletonma.org/conservation>



Hummingbird Moth

Reuben Hour Library Plant List (5/9/2020)

Table with 6 columns: Quantity, Botanical Name, Common Name, Size, Notes, Comments. Lists various plants like Acer, Amelanchier, Cercis, Diervilla, Hamamelis, etc.



Small plant label



Virginia Rose



Prairie Willow



Beardtongue

Reuben Hoar Plant List

Reuben Hour Library Tall Fescue Wildflower Mix

Table with 4 columns: Botanical Name, Common Name, % Weight. Lists various wildflowers like Achillea, Baptisia, Cirsium, etc.

Source: Prairie Moon Nursery

Recommended Nurse Seeds: Prairie Moon's Begreen, a short lived perennial cross between annual wheat and perennial wheat grass

Mowing: Throughout first season when plants reach 8-10 inches and mow down to 4-5 inches. After first 1-2 years recommend annual burning or mowing.

Not available for the mix: Diervilla lonicera (northern bush honeysuckle), Eutrochium dubium (coastal plain Joe Pye weed), Solidago puberula (downy goldenrod) and Spirea alba (Meadowsweet)

Sweat Bee



CONTRACT
LOCATION
UNDERGROUND
PRIOR TO

[illegible]

NOTE
CONTRACTOR TO CONFIRM
LOCATIONS OF AS-BUILT
UNDERGROUND UTILITY LINES
PRIOR TO ALL EXCAVATIONS

GEGEAR LAB AT UMASS DARTMOUTH**Welcome to the native plant finder for
pollinator species at risk in Massachusetts!**

The plant recommendations for bumblebee species are based on 5 years of species-level field research by the Gegear lab. A species is considered to be at risk if it has shown a significant decline in abundance over the past few decades. It is important to note that pollinator species considered 'rare' or 'specialist' are not necessarily at risk - many rare species are stable and many specialist species have increased

in abundance.

The master chart is divided into four categories of plants: pollen sources (bumblebee focus), nectar sources (bumblebee focus), host plants (butterflies) and nectar/pollen sources for other (non bumblebee) bees. Pollen sources are critical because they enable bees to make more bees, nectar sources are critical because they provide fuel for adult bees and butterflies to be active, and host plants are critical because they give caterpillars (larval stage of butterflies) something to eat! Remember, including plants that provide all three functions to as many species as possible throughout the season is critical for developing an effective conservation plan for native pollination systems (the animal AND the plant side of the equation).

THINGS TO CONSIDER:

- Select nectar and pollen plants so that you have blooms in every season: Early (March-May), Mid (June-July) and Late (Aug-Sept).
- Spring floral resources are extremely important for all at risk pollinator types so give them a high priority.
- Be aware that in most cases, the species of a plant is far more beneficial to pollinators than named cultivars.
- Select plants that target as many species from the three pollinator groups as possible - a good habitat will support species at risk over the entire season.

Scroll down for a complete list of butterfly and other (non-bumblebee) bee species at risk present during each part of the season. For butterflies, charts are specific to each region of Massachusetts, with host plant and flight time information also provided for each species. Flight time is the part of the season when the adults are present and looking for nectar sources.

Together, we will keep biodiversity and ecosystem health humming for years to come!

--RJ Gegear

Pollen Sources												'At risk' species					
LATIN NAME	COMMON NAME	PLANT TYPE	SUN	SOIL	BLOOM TIME								BUMBLEBEES			BUTTER FLIES	OTHER BEES
					Early		Mid		Late		B. terricola	B. fervidus	B. vagans				
					M	A	M	J	J	A	S	O					
Hypericum ascyron	Great St. John's-wort	Herb. perenn.	Full-Part	Med												NA	
Hypericum majus	Greater St. John's-wort	Herb. perenn.	Full-Part	Med, Wet												NA	
Hypericum punctatum	Spotted St. John's-wort	Herb. perenn.	Full-Part	Med, Dry												NA	
Hypericum prolificum	Shrubby St. John's-wort	Shrub	Full-Part	Med, Dry												NA	
Rosa acicularis	Bristly rose	Shrub	Full-Shade	Med, Dry												NA	
Rosa blanda	Smooth rose	Shrub	Full-Part	Med, Dry												NA	
Rosa carolina	Carolina rose	Shrub	Full-Part	Wet, Med, Dry												NA	
Rosa nitida	Shining rose	Shrub	Full-Part	Wet, Med												NA	
Rosa palustris	Swamp rose	Shrub	Full-Part	Med												NA	
Rosa virginiana	Virginia rose	Shrub	Full-Part	Med												NA	
Rubus odoratus	Flowering raspberry	Shrub	Full-Part	Med												NA	
Salix discolor	Pussy willow (male)	Shrub	Full	Med												NA	
Salix humilis	Prairie willow (male)	Shrub	Full-Part	Med, Dry												NA	
Salix lucida	Shining willow (male)	Shrub	Full-Part	Med, wet												NA	
Salix occidentalis	Dwarf prairie willow (male)	Shrub	Full-Part	Med, Dry												NA	
Salix petiolaris	Meadow willow (male)	Shrub/sm tree	Full-Part	Med												NA	
Salix bebbiana	Bebb willow (male)	Shrub	Full-Part	Dry, Med, Wet												NA	
Spiraea alba	White meadowsweet	Shrub	Full-Part	Wet, Med												NA	
Spiraea tomentosa	Steeplebush	Shrub	Full-Part	Wet												NA	
Nectar sources					BLOOM TIME								BUMBLEBEES			BUTTER FLIES	OTHER BEES
LATIN NAME	COMMON NAME	PLANT TYPE	SUN	SOIL	Early		Mid		Late		B. terricola	B. fervidus	B. vagans				
					M	A	M	J	J	A	S	O					
Blephilia hirta	Hairy woodmint	Herb. perenn.	Part-Shade	Med,Dry													
Blephilia ciliata	Downy woodmint	Herb. perenn.	Part-Shade	Dry													
Astragalus canadensis	Canadian milkvetch	Herb. perenn.	Full-Part	Wet, Dry													
Eupatorium perfoliatum	Boneset Thoroughwort	Herb. perenn.	Full-Part	Wet, Med													
Pycnanthemum tenuifolium	Narrowleaf mountain mint	Herb. perenn.	Full-Part	Med, Dry													
Asclepias amplexicaulis	Clasping milkweed	Herb. perenn.	Full-Part	Dry													
Asclepias exaltata	Poke milkweed	Herb. perenn.	Part, Shade	Med, Dry													
Asclepias incarnata	Swamp milkweed	Herb. perenn.	Full-Part	Med, Dry													
Asclepias purpurascens	Purple milkweed	Herb. perenn.	Full-Part	Wet, Med,Dry													
Asclepias quadrifolia	Four-leaved milkweed	Herb. perenn.	Full-Part	Med, Dry													
Asclepias syriaca	Common milkweed	Herb. perenn.	Full	Wet, Med, Dry													
Asclepias tuberosa	Butterfly milkweed	Herb. perenn.	Full-Part	Dry													
Asclepias verticillata	Whorled milkweed	Herb. perenn.	Full-Part	Med, Dry													
Cercis canadensis	Eastern Redbud	Tree	Part	Med, Dry													
Eutrochium dubium	Coastal Plain Joe-Pye weed	Herb. perenn.	Full-Part	Wet, Med													
Eutrochium fistulosum	Hollow Joe-Pye weed	Herb. perenn.	Full-Part	Wet, Med													
Eutrochium maculatum	Spotted Joe-Pye weed	Herb. per															

<i>Cirsium horridulum</i>	Yellow thistle	Herb. perenn.	Full	Med, Dry																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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[illegible]

Gardening for Native Pollinators



...it differs from traditional gardening

Plant Selection

Some native plants help declining pollinators better than others, because they have co-evolved over millennia.

Choose an assortment of native plants that vary in color and shape and that collectively bloom all season long.

Include native, early-blooming shrubs in your yard to give pollinators the best start when they emerge in spring.

Make sure to choose straight species and not cultivars. Cultivars do not provide the necessary nutrients for pollinators. How can you tell if a plant is a cultivar? Cultivars typically have an additional pretty name in quotation marks after the Latin name.

Do not purchase plants that have been treated with neonicotinoids. The only way to know is to ask the nursery staff.



Carolina rose



White turtlehead



Butterfly milkweed



Pussy willow

For guidance, plant lists, and additional information, visit:
www.svtweb.org/gardens

Maintenance

Pollinators need more than flowers.

They also need shelter, which they find in places you might not expect, such as holes in the ground, garden debris, and hollow stems.

To promote essential habitat for pollinators, allow some areas of your garden to be less formal and a little "messy." Leave the leaves, don't remove dead stems, and don't clean up in the spring until after mid-May.

Eliminate or reduce the use of pesticides.



Dead wood



Hollow stems



Bare ground



Leaf litter



www.svtweb.org/mca-nptf

The NPTF seeks to conserve native pollination systems by providing specific habitat requirements and by reducing threats for at-risk pollinators in the 36 communities of the Metrowest Conservation Alliance (MCA).



www.svtweb.org

Sudbury Valley Trustees is a nonprofit land trust that conserves natural areas and farmland in the 36 communities surrounding the Sudbury, Assabet, and Concord Rivers. SVT is the coordinator for the MCA.

Why Save Native Pollinators?

Plants need pollination to reproduce, and their successful pollination relies upon a group of animals known as “pollinators.”

While gathering nectar and pollen, insects transfer the male parts of one flower to the female parts of another of the same species. Then, a fertilized seed can grow into a new plant.

This process keeps the environment healthy. In Massachusetts, about 75% of flowering plants rely on animals for pollination. Imagine what missing 75% of our flowering plants would look like, and imagine how many birds, deer, and other animals use these plants as food and habitat.

Nature is like a web where everything is connected. If pollinators disappear, almost everything else will follow suit.

Despite the important service pollinators provide, they have not received the protection they deserve. Over the last two decades, pollinator populations have been dropping. The primary reason? Loss of habitat. The plants where insects eat, shelter, and lay their eggs have been crowded out by development and non-native invasive plants.

But all it takes to turn this trend around is a little yard space and some gardening tools.

Any garden has the potential to be a haven for declining pollinators like the golden northern and the half-black bumble bee.

The opposite side of this sheet offers tips for how you can turn your garden into healthy habitat for pollinators.



Honeybees Are Not Native Pollinators

Honeybees, which are often used to pollinate agricultural crops, are not native to North America. They were imported from Europe and are not part of our environment's natural web.

The job of pollinating the wild plants that sustain our natural environment falls to native bees and other native insects.

Some research has shown that honeybees can harm our native bees because they are aggressive and can spread diseases. Other research has shown that native bees can pollinate food crops more efficiently than honeybees.

The NPTF encourages you to take steps to help our native bees, many of which are declining in population.



Brown-Belted Bumble Bee
(native)



Honey Bee
(non native)