Butterfly Gardening 101: Our Garden in Western Massachusetts Bill Benner and Joe Wicinski Revised January 2018

We have been gardening for butterflies, hummingbirds, and other pollinators for thirteen summers at our home in beautiful Whately, MA. We live at 560 feet, in the low eastern foothills of the Berkshires, as they first begin to climb west out of the Connecticut River Valley. Our property is an east, south, and west-facing mosaic of rocky outcrops, rich loam, sandy fill, and damp to wet swamp in a mixed deciduous/white pine/hemlock woodland. Light varies from partly to mostly sunny during the day, to full shade in some spots. We have many garden beds, some terraced, many dug out of the lawn. Other areas of lawn we leave unmowed, or have dug up once, then scattered pre-mixed seed packages of "butterfly mix", then left them go wild and become tiny "meadows". Rocky ledge pokes through in multiple spots. The back of the property, before it climbs up the forested mountain behind us to the west, is a low wetland swampy area, waterlogged in spring, occasionally almost dry enough to walk around in by later summer; the little rivulet that starts here winds through neighbors' woods and then feeds into the West Brook, and eventually into the Connecticut River. To date, we have seen 60 total species of butterflies in our yard (of approximately 110 total in Massachusetts), and we average more than 40 species each year.

Our garden year starts in late winter. We mulch the many flower beds annually beginning in late March or early April, as soon as the snow melts and before most of the perennials have started to sprout. We use compost as mulch, 3 or 4 inches worth every year, from Bear Path Farm, right up the road from our house (www.bearpathfarm.com). They will deliver their excellent compost to many parts of the state. We occasionally weed out the meadow areas in the lawn in the early spring, every few years, removing those plants that we know will take over (e.g. some of the goldenrod), and/or contribute little to pollinators (e.g. ground-ivy), and then sprinkle them thinly with mulch as well. We also get aged manure from generous friends sometimes to spread thinly over the all of the beds, including the meadow gardens, in the winter. Chicken manure is like gold for the garden, if you can get it; sheep manure is supposed to be almost as good, because the sheep chew their cud so finely that they grind up all of the unwanted seeds.

Our garden composting, along with the spring cleanup of the beds and the pruning of apples and blueberries, begins the outdoor gardening year for us. But work on the garden has already begun inside, where we set up racks with lights in late winter to start many of our seedlings indoors. This is greatly preferable to trying to start them on windowsills, where they tend to become leggy and lopsided. We set it up using do-it-yourself metal shelving units with wire grid decking, the plant trays sit on top of the decking. Standard 4 foot shop lights hang from each metal grid shelf by short chains and eye hooks to illuminate the shelves below, and they're all on inexpensive timers from the hardware store. Plastic seed starting cell packs, and the ProMix[©] we use to start the seedlings, and a number of the seeds themselves, are purchased from Hadley Garden Center (a great

local source); the sturdy plastic waterproof trays in which they fit came from Gardener's Supply Company (www.gardeners.com).

Some of the perennial seeds need to be cold-stratified. This process starts in December or January and involves taking the seeds and sowing them in moist ProMix in a small flat with a cover (we use the covered rectangular plastic containers that spring mix and other salad greens come in from the grocery store). You can also mix the seeds with a small amount of moistened vermiculite in a plastic baggie. Then, refrigerate them for 60 to 90 days. Check periodically to make sure they aren't moldy. Spraying them right after sowing with a light spray of properly mixed RootShield[©] (available from garden catalogs or stores) helps to prevent mold (this product works well as an initial watering for all seed plantings, to help prevent damping-off). After 60 to 90 days, bring out under light at room temperature and germinate normally. This makes a huge difference in germination rates; you will be lucky to get 10% germination for milkweeds, for example, if you just plant the seed in the sping at room temperature, whereas with cold stratification, it approaches 100% with fresh seed. Bill Cullina's book Wildflowers: A Guide to Growing and Propagating Native Flowers of North America (2000, New England Wildflower Society), is an excellent resource for starting native plants from seed, with specific requirements listed for each genus and a wealth of other information.

Once we are done with composting, or while we are doing it, we start moving and dividing those established perennials that we need in other spots. Some of the perennial seedlings can go into the ground then as well, but most need to be grown up over the summer in larger-sized cell packs or small pots, and planted out in September. (For these plants, we generally incorporate some perlite into the ProMix when we put them into larger pots outdoors in the spring, about 4:1 Pro-Mix to perlite, which helps to improve drainage in the pots and seems to give the plants a larger root system by fall. Keep them watered over the summer, as it's easy for them to dry out in their little pots on hot sunny days!) Once danger of frost is past (around Memorial Day for us), everything else goes out into the beds—seedlings from our growing shelves; plants we've ordered from mailorder places; and plants we've bought locally. From that point on, it's weeding and watering as needed, though the weeding is much reduced by having the beds mulched, and the watering isn't as necessary for some of the well-adapted native plants, unless drought becomes severe.

In no particular order, here are some more thoughts about gardening for pollinators, and practical tips which have worked for us:

Don't be too overzealous when it comes to weeding and tidying up. Some flower beds need to be kept weed-free, or their plants will be overwhelmed. But "weeds" are also your friends, when gardening for wildlife. For example, some weeds act as host plants for butterfly caterpillars: Lamb's Quarter for Common Sootywing; Queen-Anne's-Lace for Black Swallowtail; aster spp. for Pearl Crescents. Rich Cech's and Guy Tudor's book, *Butterflies of the East Coast: An Observer's Guide* (2005, Princeton University Press), will give you lots of good information about host plants for our butterflies. Weeds also provide structure and hiding places for innumerable small creatures. When pruning

branches and weeding and cleaning up, making brush piles around the edges provides great wildlife habitat. And speaking of cleaning up, we don't do a fall clean-up at all. All of those dead stems and leaves and seedheads provide winter food and cover for the insects, birds and other wildlife, as well as for the overwintering stages of many of those pollinators we are trying to attract and protect. Don't worry about how it looks—it's all going to get covered up with snow anyway! Spring is our major cleanup time, and also the time we prune back overzealous trees and shrubs so that we still get light into the garden.

Avoid pesticides and herbicides. This includes lawn treatments—we make no attempt to have a weed-free lawn. That means the American Coppers we love are in the yard on the Sorrel, and the Dandelions are there for the early spring butterflies to nectar. Having said that, we do admit to very judicious use of insecticidal soap sometimes—for example, on the aphid outbreaks that annually seem to affect the flower buds of Trumpet Honeysuckle and Swamp Milkweed. We hand-pick pests when possible—Japanese Beetles and slugs/snails come to mind. Planting disease-resistant varieties (e.g. mildew-resistant Zinnias) helps. Monarda didyma 'Jacob Cline' is not only the hummingbirds' favorite red Bee Balm, but it is also one of the most resistant to mildew. It is worth mentioning here that many nursery plants available from the local "big box" or other bargain stores have been treated with systemic insecticides, such as neonicotinoids. This happens before the retailer ever sees them, and the pesticides can persist in the plant for many weeks, sometimes as long as the whole growing season. Buy your plants from growers who are not using any of these chemicals, if it's possible to know this, or you will be harming, even outright killing, the very insects you are trying to attract.

Consider saving seeds and starting your own seedlings. It might save money (that's debatable, given what we've spent on shelves and lights for the seedlings), but it does allow you to grow locally-adapted plants, and continue growing plants that might not otherwise be so easy to find. Importantly, you will also know that your plants are pesticide-free.

Try new things. Some of our favorite plants are things that we didn't necessarily think would pan out, but they end up doing well in our microclimate. There are a number of websites and nurseries specializing in pollinators where you can order things to try, both plants and seeds. A few examples we have ordered or bought from include: Hadley Garden Center on Rt. 9 in Hadley—big selection, of seeds in winter plus annuals and perennials in summer; The New England Wildflower Society's Nasami Farm in Whately (www.newfs.org), local and excellent; Select Seeds (www.selectseeds.com), also good for more locally adapted plants, since they are in Connecticut; Prairie Moon Nursery (www.prairiemoon.com); Digging Dog Nursery (www.diggingdog.com); Almost Eden (www.almostedenplants.com); High Country Gardens (www.highcountrygardens.com); Vincent Gardens (www.vincentgardens.com); Niche Gardens (www.nichegardens.com); Goodwin Creek Gardens (www.goodwincreekgardens.com); Swallowtail Garden Seeds (www.swallowtailgardenseeds.com); Flowers by the Sea, especially for Salvias (www.fbts.com).

Don't forget to grow some things that you just plain like. Some of our plants are things that were favorites from our childhood gardens. We love Echinaceas, so we have lots; they are great butterfly plants. We like trying new Salvias. The hummingbirds ignore some of them, but others are surprisingly successful, and some plants we thought were tender have unexpectedly overwintered. Four O'Clocks and Nicotiana are old-fashioned favorites that happen to be good for sphinx moths as well; they self-seed well once you have them.

Flowers are necessary in a garden, but trees, shrubs, and vines are also important. They are sometimes host plants (e.g. oaks for hairstreaks; pines for elfins; spicebush, sassafras, and pipevine for swallowtails). Just as importantly, they also provide structure and cover—crucial for butterflies and hummingbirds and many other pollinators.

Plan to have things blooming from earliest spring through frost. For example, the native Bluets will form a carpet of pale sky blue in early spring, when little else is blooming yet, and the small elfins and azures use them readily. Native Eastern Columbine, *Aquilegia canadensis*, starts blooming almost exactly at the same time the first hummingbirds appear, and is one of that pollinator's favorite early nectar sources. Asters and goldenrods are great late summer and fall insect nectar plants. We have a single pink Chrysanthemum that spreads around the garden that blooms in October and November, the last nectar source for the latest autumn butterflies. We use a combination of annuals and perennials, natives and non-natives, to try to keep nectar (and color!) in the garden throughout the seasons. And don't forget the nighttime pollinators too—the Four-O'Clocks and *Nicotiana* spp. attract a variety of sphinx moths in the evening as it is getting dark, and have a great fragrance as well.

Herb gardens are dual-purpose, with herbs for eating, drying, etc., and for hosting butterflies and caterpillars: Parsley, Dill, and Fennel for Black Swallowtails; Rue (*Ruta arvensis*) for Giant Swallowtails, an exciting new addition to our Massachusetts butterfly fauna; mints for their tiny flowers that hairstreaks seem to like.

Deadheading helps to extend the blooming season for a lot of plants. The extent to which we do this depends on the plant. Echinaceas don't get deadheaded at all, since we know how much the goldfinches like the seeds. Buddleias get rigorously deadheaded, to keep them blooming and to keep them from setting seeds that might be invasive. Don't be too vigorous with the deadheading, at least toward the end of the season, for the plants from which you'd like to save seeds.

Try not to fight too much with your microhabitats. Here, we have wet clay, dry rocky soil, and deep garden loam, sometimes within a few feet of each other! It's best to plant those plants that prefer sun in the sunny spots, and moisture lovers in the wetter places, etc. This sounds obvious, but the desire to try to put things where they'd rather not be can be subtle and insidious, and has multiple times required later moving things around. But, we also try to leave some of the volunteers where they have come up, especially in the spring when we are doing our major clean-up and mulching. Plants end up in places we wouldn't have thought of, and often do really well there; we mow around the clumps

of Butterfly-weed that have seeded themselves into the remaining lawn, for example. Volunteers have often sprung up in certain places because that's where they'd really like to be. One of the more difficult learning curves has been recognizing all of the plants' leaves as they come up in the spring, both the established plants and the unexpected seedlings. Our method largely has been to leave any seedlings/sprouts that look unfamiliar until they get big enough to ID.

Speaking of moving things, don't be afraid to move and/or cull if you need to. We hate to kill things or throw them away, so we usually move the failures to some new (often more marginal) location. Sometimes that works, and often it doesn't, and we end up discarding it anyway, or it just dies out. And if a plant, even one we really want, keeps dying out after a few tries, best to reluctantly give that up and try something else.

Finally, take the time to enjoy the garden! It's easy to look around and find plenty of things that need doing, and the work can seem never-ending. But don't forget to get a good book and sit in a chair under a tree—read, watch butterflies, snooze, relax.

The following annotated list of pollinator plants, in no particular order, includes most of those that we grow, or that grow here without any help from us. Many are planted and carefully tended; some are volunteers; others we need to keep tightly reined or they try to take over. The list generally includes only those species that are used by butterflies. We grow many other hummingbird-pollinated plants as well. This is not an exhaustive list, but includes most of our "big guns."

Native Perennials

Black-eyed Susan *Rudbeckia hirta* cv. (probably 'Goldsturm')

Present in many places in the garden when we moved in. Excellent nectar source. Hardy, easy-to-grow perennial with a long mid- to late-summer blooming period; very colorful in the garden. Loved especially by Pearl Crescents, and many bees. Spreads by seeds and runners; we transplant these to cultivate, and give many away.

Brown-eyed Susan Rudbeckia triloba

This is a really pretty, tall multibranched plant, covered in smaller Black-eyed-Susan-type flowers, but tinged with rusty red and brown. Very attractive, but also seeds will come up everywhere around the plant, so be warned. Easy to grow from seed.

Blazing-Stars Liatris spp.

The *Liatris* prairie natives grow well in our sandy, drier spots. The native species are not invasive and are very beautiful, and the butterflies really like them. We grow *L. spicata*, *L. pycnostachya*, *L. borealis*, *L. aspera*, and *L. ligulistylis*. Grown from seeds. Beware of the alien, wetland-loving but similar-looking Purple Loosestrife, *Lythrum salicaria*—a terrible invasive that is rightly banned in MA.

Blanket Flower Gaillardia cvv.

Like all the composites, good for nectar. Possible host plant for Common Buckeye? Mostly grown from seed, though we've purchased a few plants; there are annual and perennial varieties.

Sneezeweed Helenium cv.

Another composite that gets some butterfly use, but prone to mildew for us.

Bee Balm *Monarda didyma* 'Jacob Cline'; *M. didyma* 'Raspberry Wine'

Wild Bergamot Monarda fistulosa

M. didyma is mostly for hummingbirds, though Spicebush Swallowtail uses it for nectar. M. fistulosa is an outstanding butterfly nectar source in midsummer, swarming with skippers and other butterflies, as well as bumblebees and other pollinators. One of the top 5 when in bloom. M. fistulosa spreads readily from seed, and will need to be weeded out if it comes up where you don't want it. M. didyma spreads by root runners, and like all mints, needs regular thinning.

Purple Coneflower *Echinacea* purpurea cvv.

Another outstanding midsummer nectar source. One of the top 5. Grown from seed, but we have also bought garden cultivars.

Cardinal Flower *Lobelia cardinalis* Great Blue Lobelia *L. syphilitica*

Cardinal Flower is another primary hummingbird magnet that is also loved by Spicebush Swallowtails. Great Blue Lobelia is beloved by bumblebees, but we have seen skippers use it. From seed.

Violets *Viola* spp.:

Labrador Violet *V. labradorica* Arrow-leaved Violet *V. sagittata* Common Blue Violet *V. sororia* Sweet White Violet *V. blanda*

All of the violets serve as possible host plants for fritillaries. Sweet White Violets form a large, spreading patch in the lowest, wettest area of our garden, and have hosted Silver-bordered Fritillary caterpillars for us. White M Hairstreak and elfins also nectar on their tiny white flowers, which bloom in spring at the same time as the Bluets. All of the violets propagate themselves

from seed, and were here when we moved in.

Moss Phlox Phlox subulata

The early spring butterflies occasionally use this carpet of flowers during its early bloom period. Easy to grow in a rock garden; spreads.

Asters Symphyotrichum spp.

Annuals and perennials. Excellent late summer and fall nectar. New England Aster is especially good, but also prone to mildew in our damp garden, so we sometimes spray that one with fungicide early in the season. Some of the cultivars of New England and New York Asters are bought plants, but our woods and edges are also full of native species. *S. puniceum* is very common in our wet areas, and one of our favorite fall asters—butterflies and other polllinators love this plant, and drifts of its pretty light blue flowers look great in wilder areas.

Butterly Weed Asclepias tuberosa Purple Milkweed A. purpurea Swamp Milkweed A. incarnata

All of the milkweeds are good nectar sources as well as hosts for Monarchs. Common Milkweed (A. syriaca) is too invasive, unless you have a large open meadow—we only tried it once, then spent years trying to eradicate it, from only one plant!, as the roots spread for many feet and send up sprouts which grow quickly and well. A. tuberosa is well-behaved, especially loved by the large fritillaries. A. incarnata is prone to attack by aphids and Swamp Milkweed Beetles, but is well-loved by skippers and others. A. purpurea is a great plant, much like Common Milkweed, but not invasive. We propagate all of these mainly from saved seed (requires coldstratification) though A. tuberosa selfseeds around the garden and lawn.

Agastache x 'Black Adder' Anise-Hyssop, Agastache foeniculum

Most of the Agastaches we have are hummingbird plants (*A. rupestri*, *A. canas*), but this species (*A. foeniculum*) is a 6 foot tall insect magnet for many weeks throughout the summer. The 'Black Adder' hybrids are bought plants; the species grows from seed prolifically throughout the garden, and needs to be weeded out where it isn't wanted.

Hollyhocks and Mallows Malva cvv.

We grew these for years in the hope of someday seeing a Common Checkered Skipper. Hey, you never know...we thought Giant Swallowtail was farfetched when we first planted Rue! Then, in September 2014, a Common Checkered-Skipper appeared in the yard, one of the very few Massachusetts recorded locales. If you plant it, they might come!

Goldenrods Solidago spp.

A mainstay for fall butterflies. Propagates itself from seed, and clumps also spread. This grows in the unmowed "field" patches that we have scattered throughout the garden.

Cup-Plant Silphium perfoliatum

Skippers especially use this, and it is always covered with bees. Bought plants They are giants, up to 10 feet tall. Not for the faint-of-heart gardener.

Wild Lupine Lupinus perennis

Potential host for Frosted Elfin, though seeing one is highly unlikely away from their known colonies. Propagated from seed collected from wild plants locally.

Culver's Root Veronicastrum virginicum.

Great nectar source for pollinators and small butterflies in mid to late summer, even though it only blooms for a few short weeks. Several of our Gray Hairstreak sightings have been on these flowers. One bought large clump of a plant. It gets quite tall and floppy, so it appreciates being staked and wands tied together or grown inside a wire circle.

Bluets or Quaker Ladies Houstonia caerulea

Excellent nectar source for elfins in the spring. Makes a beautiful ground cover when happy, via self-seeding, as long as you are not too quick to mow it down in the spring.

Pickerel-Weed Pontederia cordata

Excellent nectar source in midsummer in our semi-permanent little stream/ditch. Locally collected plants.

Ironweed Vernonia noveboracensis

We only have one of these plants, and it is a large clump of tall stems topped by deep purple flowers that the butterflies love. We intend to get more—it is apparently not self-fertile, because we are unable to collect any viable seeds from our lone individual.

Joe-Pye Weed Eupatorium purpureum

Decent midsummer nectar plant, growing well in the wetter marshy area. Self-sows.

Boneset E. perfoliatum

All of the *Eupatoriums* are good nectar sources, though this one doesn't seem quite as popular for us as some of the other plants in the yard

Mountain-Mints Pycnanthemum

We've had both Narrow-leaved (*P. tenuifolium*) and Hoary (*P. incanum*) Mountain-Mint, but Hoary is the much better of the two as a nectar plant for us, and Narrow-leaved has not persisted in the garden. Mountain-mints are particularly attractive to the smaller butterflies—skippers, hairstreaks, etc.—which can reach the nectar in its small blossoms, though butterflies of all sizes use it and like it. It is also very attractive to pollinating wasps! It spreads, so site it carefully. From seed collected from local plants.

Pussytoes Antennaria sp.

Host plant for American Lady. Bought plants. Not long-lived in the garden for us, where we tend to overwater and overfertilize it, but does OK spreading over the rocks. Prefers poor soil.

Toothwort Dentaria diphylla

Host plant for West Virginia White, growing in the wet swampy area in the back of the yard. This was here naturally when we moved in, but you can probably buy plants.

Turtlehead Chelone glabra

Another plant in the wet swampy area; host plant for Baltimore Checkerspot. This and the above Toothwort appeared on their own in the wet areas of the yard, though they are scattered and grow in low numbers. We have added to the Turtlehead population by cultivating from seed, and as gifts from friends. We also have a pink-flowered cultivar of Turtlehead (probably *C. lyoni*), but this does not seem to be used by butterflies.

White Wild-Indigo Baptisia alba

We have a small but thriving population of Wild Indigo Duskywings on our *Baptisia*, even though we only have a couple of large plants. There are several species of Baptisia that can be used as garden plants. We got a few seeds of this one from friends.

Native Trees, Shrubs, and Vines Wild Cherry Prunus serotina

Host plant for Tiger Swallowtail, Coral Hairstreak, as well as Cecropia and Polyphemus moths. Present in our woods.

Beach Plum Prunus maritima

Excellent early spring nectar source for elfins and other early butterflies. Red Admirals seem to really like this. Purchased plants. You need two different clones if you want plums, which do make excellent jam.

PawPaw Asimina triloba

Host plant for Zebra Swallowtail, a gorgeous southeastern U.S butterfly (we arer really dreaming here!) Hardy for us, though slow-growing, and will produce apparently tasty fruit if they ever get large enough. We purchased plants of cultivars specially selected for fruit and hardiness. Like Beach Plum, you need at least two varieties for fruit.

White Pine Pinus strobus

Host plant for Eastern Pine Elfin. Common in our mixed forest.

Elms *Ulmus* spp.

Alternate host for Mourning Cloaks. Also common around our yard edges,

American Beech Fagus grandifolia

Theoretically a host for having Early Hairstreak in the yard—if the saplings we have ever get big enough to have flower buds, and if hell freezes over.

American Hackberry Celtis occidentalis

Host plant for Question Mark, as well as the Emperors, and (if we're someday lucky!) American Snout. Purchased 3 saplings, which grow at the edges of the driveway in partial shade.

Azaleas and Rhododendrons:

Rhododendron viscosum

R. calendulaceum

R. atlanticum

P. nudiflorum

Rhododendron garden cvv.

Mountain Laurel Kalmia latifolia

All of the rhododendrons and azaleas, but especially the Mountain Laurel and the large purple-flowered rhododendrons, are used for nectar by Tiger Swallowtails when they bloom in June. Most of the *Rhododendrons* were purchased, but large stands of Laurel are native to the yard. The native azaleas are also good for hummingbirds!

Spicebush *Lindera benzoin*Sassafras *Sassafras albidinum*

Both are host plants for Spicebush Swallowtail (as well as Promethea moth). Both were collected locally from roadside plants

Dwarf Fothergilla Fothergilla gardenii

Good early spring nectar source, e.g. for elfins. Purchased plant. Deer have sometimes eaten the flower buds in the winter.

Buttonbush Cephalanthus occidentalis

Excellent, popular nectar shrub for a partly to mostly shady moist or wet area. This is fairly easy to grow, shade tolerant though does OK in full sun, overall an outstanding shrub for the midsummer butterfly garden. Purchased plants.

Steeplebush Spiraea tomentosa

A garden volunteer that we didn't plant. The insects like it, though it's not an outstanding butterfly plant.

Dogwood Cornus florida

The azures possibly oviposit on the buds, and the Silver-spotted Skippers seem to particularly like this tree for basking and sortie perches. Mature tree present in garden at purchase.

Highbush Blueberry Vaccinium corymbosum

Blueberries can host Striped Hairstreaks, and we have seen them on our blueberries. We have 4 cultivated plants (never sprayed), as well as at least one wild shrub in the wetland area.

Summersweet Clethra alnifolia Clethra 'Ruby Spice' Clethra "16 Candles"

Clethra, or Summersweet, is a wonderful shrub for summer nectar for butterflies. Highly recommended, very fragrant, likes moisture but tolerates normal garden soil as well as partial shade. Purchased plants—and we will be purchasing more. Ruby Spice has particularly attractive pink flowers.

Willows Salix spp.

Host trees/shrubs for Mourning Cloaks. Pussy Willow is attractive in the spring. Common in our wetland area.

Alder Alnus sp.

Theoretical host for Harvesters, though we have yet to see woolly aphids or Harvesters on our alders. A native wetland shrub/small tree.

Bottlebrush Buckeye Aesclepias parviflora

Produces wands of white flowers in mid-summer, used by insects as well as hummingbirds. Bought plants.

Northern Prickly-Ash (Xanthoxylum americanum)

This shrub/small tree is another host plant for the Giant Swallowtail. It will survive in partial shade as well as sun.

Leadplant or Indigo Bush Amorpha fruticosa

This interesting tall shrubby plant with pea-like foliage has late spring wands of purplish brown flowers that are great for pollinators and have an interesting fragrance. Bought plant.

Dutchman's-Pipe Aristolochia macrophylla

A hardy, shade-tolerant vine that is a host plant for Pipevine Swallowtail. Worth growing in a corner somewhere—or let it climb 50 feet up into the trees, like our friends Shelley and Dave Small!

Non-native Perennials:

Wild Mustard Brassica rapa

Both a host and a popular early spring nectar source for Cabbage Whites.

Oriental Lily Lilium cvv.

Day-Lily Hemerocallis cvv.

Swallowtails use the lilies and daylilies regularly for nectar, burying themselves in the blossoms.

Dandelion Taraxacum officinale

Very popular and welcome nectar source for early spring butterflies. We

make no attempt to "control" these in the yard, and the butterflies appreciate it.

Coltsfoot Tussilago farfara

Another plant that blooms extremely early in the spring, with dandelion-like flowers that are much appreciated by the first nectaring butterflies and other insects. Having said that, Coltsfoot is on the list of prohibited plants in MA, so if you haven't got it growing in a waste area already, then don't plant it.

Johnny-Jump-Up Viola tricolor cvv.

We have watched Variegated Fritillary (rare in our yard) oviposit on these. Once you have them, they pop up all over from seeds.

Catmints Nepeta mussinii, Nepeta cataria

Mints Mentha and Nepeta cvv.

The mints are invasive and need to be carefully sited, but Spearmint flowers are used by Gray and other hairstreaks. Peppermint is terribly invasive in our wetland, however. Catmint, *N. mussinii*, is a good mid-spring nectar source when relatively few other things are blooming, and its mounds of blue flowers are pretty in the garden. It self-seeds nicely amongst the rocks.

Red-clover *Trifolium pratense* White Clover *T. repens*

Good nectar source for skippers. We leave some Red-clover around the edges of the garden, and have never had the need to actually plant any. Red-clover is especially well-liked by butterflies. White Dutch Clover is often included in lawn grass seed mixes, so most people have it already, unless you're poisoning the lawn to get rid of it.

Grasses *Poa, Andropogon, Festuca, Panicum*, and other spp.

Some grasses are native; some are not. We leave areas unmowed or unweeded around the edges, and have found Northern Pearly-eyes ovipositing on some clumps next to the pergola. Most of the skippers use various grasses as hosts, and stands of Little Bluestem (*Andropogon scoparius*) are especially valuable as obligate hosts for several skipper species.

Sedum Sedum spectabile 'Autumn Joy'

Present when we moved in. Blooms in late summer, gets some good butterfly use, and is especially loved by bees and other native pollinators.

Phlox cvv.

Swallowtails, especially Spicebush, really like this as a nectar source. Be sure to buy mildew-resistant varieties.

Sea-Holly *Eringium* spp.

Joe likes these; very arresting plants and flowers, that get some pollinator use.

Yellow Hawkweed Hieracium sp.

This comes up as a "weed", but we leave it where it won't be in the way. The butterflies, especially whites and sulphurs, seem to like it. There are multiple species, some native, some alien; we're not sure what we have.

Stinging Nettle Urtica dioica

Host plant for Red Admiral. We leave it when it won't be in the way (like in the wood edges along the driveway).

Ox-eye Daisy Chrysanthemem leucanthemum

A popular nectar source in late spring, that blooms during a lull in flowering, so it is very welcome. Spreads quite easily from seed. Can be invasive.

Chrysanthemum cv.

We have a very late blooming (October into November) single large pink daisy-like variety that is very hardy, probably 'Sheffield Pink', It's a beautiful garden plant, though it spreads and needs to be reined in or it will take over a large area. Very popular nectar source for the latest Monarchs, etc., at the tail end of the

season, being the last blooming flowers in the garden.

Ragged Robin Silene flos-cuculi

This naturalized European invasive is amazingly popular with butterflies for nectar, even though it is quite weedy in our garden. Spreads aggressively from seed. Banned in CT as a noxious invasive, but present in our garden when we moved in, and impossible to eradicate. Probably not recommended to add this if you don't already have it.

Rue Ruta arvensis

We have just a few plants of this rounded, small shrubby perennial, but every year for the past few years they have attracted female Giant Swallowtails to lay their eggs. If you plant it, they might come! Self-seeds readily, so we give away seedlings each spring.

Gas Plant *Dictamnus albus* (as in Dumbledore)

Not really an herb, but it belongs here as a companion to the Rue. Another host plant for Giant Swallowtail. Somewhat slow to establish, and prefers a fairly rich garden setting.

Dill Anethum graveolens Fennel Foeniculum vulgare

Both of these herbs are very attractive to Black Swallowtails, and we regularly find their caterpillars on them. Self-seed regularly. Fennel is also half-hardy.

Wild Canna Canna indica

We plant the wild Indian-Shot (named after it's round, hard seeds) with its smaller red flowers, primarily for the hummingbirds—but this is also the host plant for Brazilian Skipper, a butterfly only recorded once or twice in Massachusetts. Again, you never know!

Queen-Anne's-Lace Daucis carota

Non-native host for Black Swallowtail. Though they seem to like the fennel, parsley, and dill best, we still find caterpillars on the stray Queen-Anne's-Lace plants. Easy to leave where they grow in the unmowed "meadow" areas.

Ground-Ivy, AKA Gill-Over-The-Ground, Lizzie-Run-Under-The-Hedgerow, Run-Away-Robin *Glechoma hederacea*

It's hard to hate a plant with this many great names, but—this plant is invasive and impossible to eradicate, and is NOT recommended if you don't have it. Still, if you do, you'll find that the early spring butterflies and bumblebees use it readily for nectar, since it begins blooming very early.

Annuals

Four-O'Clocks Mirabilis jalapa

We do not see butterflies on these, but we grow them because they were a favorite childhood plant, and because they attract evening- and night-flying sphinx moths. They self-seed regularly. You can also dig up the big tubers (carefully! they break easily...) in the fall after frost and store them like dahlia tubers over the winter in a cool but frost-free place.

Flowering Tobacco *Nicotiana alata* and *N. mutabilis* cvv.

The sphinx moths like these even better than the Four-O'Clocks! Again, not a butterfly plant, but they have a wonderful evening scent, and we have at least a half-dozen species of sphinx moths that come at night for the nectar. The old-fashioned white ones are the truly fragrant ones; the newer red cultivars sometimes have no fragrance at all. They self-seed prolifically once you have them in the garden, and can be transplanted where needed.

Tall Verbena Verbena bonairensis

One of the top 5 nectar sources in the garden—the more you have room for, the better. Self-seeds prolifically. Learn

to recognize the seedlings in the spring, because they are somewhat late to germinate, though they grow quickly. We have to leave some patches of garden unmulched in the spring to be sure of getting a crop of these to transplant, as they won't come up through mulch or compost.

Mexican Sunflower *Tithonia* diversifolia

Another excellent nectar source. If you overfeed these, however, you'll get huge plants (some of ours were over 12 feet tall in 2013!) but fewer flowers.

Zinnia cvv.

Another of the top 5 nectar plants. Easy to grow from seed, sown directly into the garden after frost has passed. Get semidoubles or others that retain the disk flowers in the center; pompoms aren't much good for nectar.

Sunflowers Helianthus cvv.

These are good nectar plants for pollinators, and though we don't see butterflies on them commonly, skippers will use them.

Pot-Marigold Calendula officinalis

Used by some butterflies (*e.g.* Eastern Tailed-Blue, Pearl Crescent) for nectar. Grown from seeds started early.

Coreopsis cvv.

Skippers especially use these for nectar, mostly in the early summer. Included in butterfly-mix seed packs; reseed themselves.

Ageratum A. houstoneanum cvv.

Gets some butterfly use. Mainly grown because we like them.

Parsley Petroselinum crispum

Food plant for Black Swallowtail; easy to grow from seed sown directly into the garden in early spring.

Nasturtiums Tropaeolum cvv.

Host and nectar source for Cabbage Whites. (Hey, they need love too...)

Lantana L. camara and cvv.

This is a decent butterfly plant, and pretty! We buy nursery-grown plants, though we have started to worry whether they have been pre-treated with neonicotinoids before we get them.

English Plaintain Plantago lanceolata

Alternate host for Baltimore Checkerspot, though we don't have them breeding in our yard (yet).

Lamb's-Quarter Chenopodium album

Host for Common Sootywing, which we do see in the yard in small numbers. We deliberately try to leave some of these, even though they are weedy.

Sorrel Rumex acetosella

Host for American Copper. Requires vigorous weeding among the rock gardens where we don't want it, but it survives in many spots, including in the drier, sandier lawn areas.

Non-native Trees, Shrubs, and Vines Weigela Weigela florida cvv.

A spring-blooming shrub that is used by Tiger Swallowtails for nectar. Here when we moved in, and we added more.

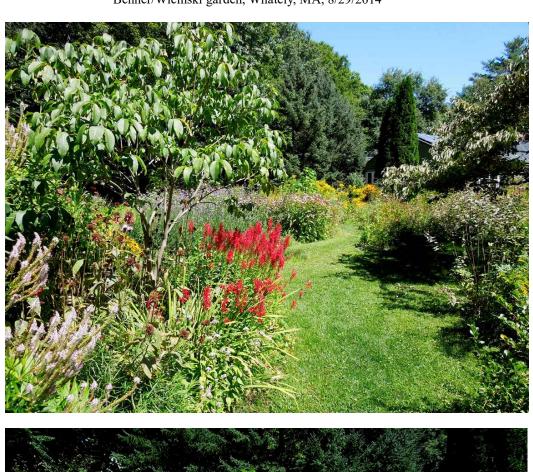
Butterfly-Bush Buddleia davidii

One of the best butterfly attractants; needs regular deadheading. Top 5 plant. Bought plants, but we also have had a rare volunteer seedling or two. We carefully deadhead to prolong flowering and prevent seeds, then prune it close to the ground in early spring.

Buddleia alternifolia

The favorite nectar source for Milbert's Tortoiseshell in our garden. We have only one of these shrubs, but we almost always see one or more Milbert's on it sometime during this plant's late-spring bloom. Used avidly by all of the other butterflies as well. Available from nurseries. Unlike the common Butterfly-Bush, this Buddleia blossoms on last year's wood, so it is best pruned right after blooming.

Benner/Wicinski garden, Whately, MA, 8/29/2014





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