

1. **Create a garden to benefit ALL pollinators and beneficial insects:** butterflies, moths, hummingbirds, bees, wasps, flies, beetles, and more! Learn a great deal about this topic by reading the article “How to Create a Butterfly and Hummingbird Garden” and utilizing the list that accompanies this article, “Recommended Plantings to Attract Hummingbirds, Butterflies, and Moths,” both by Patricia Sutton. Both were available on NJ Audubon’s website until April 16, 2018 (when a new website came on line). Currently this article and list are being updated to exclude Butterfly Bush, a proven invasive native to China (providing nectar only, where our native perennials provide nectar AND are important caterpillar plants), Rose of Sharon, and some other non-native problematic plants. In the meantime, refer to this handout.
2. My website, Pat Sutton’s Wildlife Garden, showcases teachings about (& practicing) wildlife habitat gardening: www.patsuttonwildlifegarden.com. Under “Upcoming Events” learn of programs, garden tours, etc.
3. **Begin small, one bed at a time, so you can easily maintain it (weed it, mulch it, water new plantings, divide spreading perennials) and be happy with the results. Changing 10% of your yard to more wildlife friendly plantings will make a big difference.** Chances are you’ll be so pleased with the results that you’ll want to change another 10% the following year, and so on. Install rain barrels with hoses attached that empty into the garden. Set up hoses so that you can easily water new plants (until they get established or during exceptionally dry periods).
4. **A garden in a sunny spot is more likely to attract butterflies** (because they are solar powered and need the sun’s warmth to fly). There are many native plants that thrive in shade, so consider creating a layered landscape of these shade-loving perennials in under trees and shrubs rather than trying to maintain struggling lawn.
5. **Work with what you have.** Don’t cut down your forest to create a butterfly garden. Use the sunniest part of your yard, which just might be your front yard (rather than your backyard).
6. **Maintain your yard and gardens organically: DO NOT use insecticides, herbicides, or fertilizers.** Seriously consider mixing clover seed in with grass seed. Clover is a nitrogen-fixing plant, so it enriches the soil with natural fertilizer. The deep roots of clover reduce soil compaction. Clover and Dandelion are excellent nectar plants. Keep pollinators safe by NOT using herbicides on these plants.
7. **Do NOT use insecticides** – butterflies (and moths) and so many of our beneficial pollinators are insects and will die, and hummingbirds feed on insects and will be affected.
8. **Avoid plants treated with Neonicotinoid Insecticides.** Many Box Store and everyday nursery natives have been treated with Neonicotinoids. Neonicotinoids are systemic (get into every part of the plant, including pollen, nectar, even dew) pesticides that are applied to many commercially-available nursery plants and are harmful to bees, caterpillars, moths, and butterflies. Support knowledgeable Native Plant Nurseries (like those recommended on my website) that know better than to use neonicotinoids! To learn more read the following:
 - a. Xerces Society’s “Protecting Bees From Neonicotinoid Insecticides in Your Garden (includes list of products with neonics in them)” at: <https://www.xerces.org/publications/brochures/protecting-bees-from-neonicotinoids-in-your-garden>
 - b. Xerces Society’s “How Neonicotinoids Can Kill Bees, the Science Behind the Role These Insecticides Play in Harming Bees (in depth study, 2nd Edition) at <https://www.xerces.org/publications/scientific-reports/how-neonicotinoids-can-kill-bees>
 - c. Xerces Society’s “Neonicotinoid Movement in the Environment” POSTER – Neonicotinoids are being found throughout the landscape in areas where they were not applied. This poster illustrates some of the main pathways for neonicotinoid movement in the environment and also shows how this movement has undoubtedly exposed beneficial insects – <https://www.xerces.org/publications/other/neonicotinoid-movement-in-environment>
 - d. American Bird Conservancy’s “Neonicotinoid Insecticides Harm The Little Creatures,” including how 90 percent of food samples taken from Congressional cafeterias contain neonicotinoid insecticides (highly toxic to birds and other wildlife): <https://abcbirds.org/behind-the-report-neonicotinoid-insecticides-harm-the-little-creatures/>

9. **Support native plant nurseries** and special sales of native plants. If you live in southern NJ and are **searching for NATIVE PLANTS**, I maintain an updated list of some sources of native plants on my website: www.patsuttonwildlifegarden.com/some-sources-native-plants
10. Select **NATIVE PLANTS** since so many native nectar plants are also caterpillar plants. For example, our native asters are used by 112 species of butterflies and moths as caterpillar plants (goldenrods by 115 species). If this concept is new to you, read Doug Tallamy's inspirational and packed-with-info books: (1) *Bringing Nature Home, How You Can Sustain Wildlife with Native Plants* (2007), (2) *Nature's Best Hope, A New Approach to Conservation That Starts in Your Yard* (2019), and (3) *The Living Landscape* (2014 with Rick Darke).
11. **BEWARE OF CULTIVARS** – they've been created or selected for a specific characteristic often at the expense of nectar and may even have a changed leaf chemistry (so butterflies can no longer lay their eggs on them).
12. Plant as many "Chocolate Cakes" as possible and **plant them in MASSES** (the term "Chocolate Cake" is explained in Patricia Sutton's article "How to Create a Butterfly and Hummingbird Garden," it refers to those plants that are irresistible to pollinators no matter what else is blooming). Massed plantings are more likely to catch the eye of hungry pollinators as well as make your garden dazzling to your own eye.
13. **Provide nectar spring through late fall (frost)**. Native perennials, vines, trees, & shrubs have a finite blooming period. Your wildlife habitat will be a changing palette of color and nectar as you fill it with a variety of plantings that bloom at different times. **Here are some of my favorite "Chocolate Cake" natives (and a few non-natives*)**:
 - **Spring**: Red Maple, Dandelion*, Wild Columbine, Beach Plum, Coral Honeysuckle, Coral Bells, Violets, Highbush Blueberry, Black Cherry, Black Locust, Tulip Tree, Virginia Sweetspire
 - **Mid June thru July**: Smooth Oxeye, Pickerelweed (if you have a pond), Purple Coneflower, Common Milkweed, Swamp Milkweed, Butterfly Weed, Whorled Milkweed, Garden Phlox, Blazing Star, Buttonbush, Anise Hyssop, Bee Balm, Wild Bergamot, Culver's Root, Trumpet Creeper, Turk's Cap Lily
 - **Late July thru August (and September)**: Sweet Pepperbush, Mountain Mint, Ironweed, Common Boneset, Cutleaf Coneflower (*Rudbeckia lacinata* "Herbstsonne," this cultivar is more well-behaved than the straight native), Woodland Sunflower, Partridge Pea, Joe-pye-weed, Cardinal Flower, Trumpet Creeper
 - **Mid August thru September (and October)**: Mistflower, Pink Turtlehead, Giant Sunflower, Autumn Sneezeweed, Sedum*, Late-flowering Thoroughwort, New England Aster, Common Blue Wood Aster, Smooth Blue Aster, Frost Aster, Seaside Goldenrod, Zigzag Goldenrod (and other native goldenrods), Groundsel-tree
14. **Save room in the garden for some "Chocolate Cake" annuals**. Annuals bloom all season long and until the frost, so are a steady source of nectar. Some of my favorite annuals are: Zinnias, Mexican Sunflower, Cannas, Tropical Milkweed, Tropical (or Texas) Sage, Cuphea 'David Verity' (Cigar Plant or Large Firecracker Plant), Cardinal Climber.
15. **Save room in the garden for some non-native perennials that are "Chocolate Cakes" and not problematic (invasive)**: Catmint, Purpletop Vervain (*Verbena bonariensis*), Sedum, Black and Blue Salvia.
16. **Incorporate Caterpillar Food Plants into your plan**. Doug Tallamy is working with National Wildlife Federation's Native Plant Finder: www.nwf.org/NativePlantFinder/ (where each plant is ranked by the number of butterfly and moth species that use it as a caterpillar plant).

With Monarchs needing all the help we can give them, **create Monarch Waystations** with patches of various native Milkweeds that Monarchs can use as caterpillar plants: Common Milkweed (in a meadow), Butterfly Weed & Whorled Milkweed (in a dry or meadow site), Swamp Milkweed (moist), Poke Milkweed (in a woodland site).

17. When you create a wildlife garden, **welcome all critters**: bees, wasps, flies, spiders, aphids, “the works” and read about each new visitor (you’ll learn that many are important pollinators / play key roles in the natural world). **Learn about important pollinators from Heather Holm’s two beautifully illustrated and excellent books**: (1) *Pollinators of Native Plants, Attract, Observe and Identify Pollinators and Beneficial Insects with Native Plants* (2014), (2) *Bees, An Identification and Native Plant Forage Guide* (2017). Listen to these two interviews with Heather Holm (by Kim Eierman) about pollinators: (1) <https://www.youtube.com/watch?v=w3py5g6dPz4>, (2) <https://www.youtube.com/watch?v=Ds5FgTZA3ew>
If you grow milkweed for Monarchs, you must read *Milkweeds, Monarchs, and More*, by Ba Rea, Karen Oberhauser, & Michael Quinn (Bas Relief Publishing Group, 2010, Enlarged and Updated 2nd Edition) to fully understand the many, many beetles, bugs and other insects that can live ONLY on milkweed. Learn to welcome them all!
18. **Document evolution of your gardens** -- photo BEFORE, DURING, & AFTER, and for years!
19. **Show off your garden & its visitors** (butterflies, caterpillars, hummingbirds) to neighbors, friends, family, co-workers. Share some of your divided perennials with new wildlife gardeners, so they can start their own garden with “Chocolate Cakes” – so your garden won’t be the only oasis in a sea of green chem lawns.
20. **Visit other butterfly & hummingbird gardens for design and plant ideas**. For 23 years I led tours of Private Wildlife Gardens in Cape May County. You can take a virtual tour of many of the gardens that were included on these tours on my website:
 North Tour: www.patsuttonwildlifegarden.com/north-tour-photo-gallery (Includes Sutton’s 43-year-old wildlife garden)
 South Tour: www.patsuttonwildlifegarden.com/south-tour-photo-gallery
 Mid-County Tour: www.patsuttonwildlifegarden.com/mid-county-tour-photo-gallery
21. **Maintenance – be sure to MULCH!** Use salt hay, untreated grass clippings, or pine needles as mulch to inhibit weeds and keep the soil from drying out. As a bonus these types of mulch break down into rich soil and enrich your garden. Root & bark mulch take years to break down and rob the soil of nutrients that plants need.
22. **To weed or not to weed?** Buy a good wildflower field guide and weed book and be sure you are weeding something you truly do not want. Many seedlings are nature’s gifts.
23. **Don’t tidy up in the fall** – you’ll be carrying off next year’s butterflies and moths, since many of them winter as eggs, partially grown caterpillars, or chrysalises on the plants in your garden. Too, by leaving perennials standing you are providing important winter food (spent seed heads) & cover for birds. When you do cut down the winter garden, leave substantial stems standing (break off at height of 12-15") to be used by bees that nest in plant stems. Consider laying stems and seed heads (from your cut down winter garden) loosely in your woods or along the edge of your property, so that any life in them (eggs, partially grown caterpillars, chrysalises, cocoons) have a chance of surviving and continuing with their metamorphosis. These spent seed heads may result in additional nectar plants where you laid them.
24. Consider **SIGNAGE for your wildlife habitat** (and the more the merrier) – so neighbors (and your municipality) understand why you have an explosion of wildflowers instead of lawn:
 (1) Monarch Waystation: <http://www.monarchwatch.org/waystations/certify.html>
 (2) Certified Butterfly Garden: <http://nababutterfly.com/butterfly-garden-certification-program/>
 (3) Wild Ones Yard Sign: <https://wildones.org/butterfly-garden/certify-your-garden/>
 (4) Certified Wildlife Habitat: <http://www.nwf.org/Garden-For-Wildlife/Certify.aspx>
 (5) Xerces Society: “Pollinator Habitat Sign”: <https://gifts.xerces.org/products/pollinator-habitat-sign>
 (6) Pesticide Free Zone Yard Signs:
www.beyondpesticides.org/programs/lawns-and-landscapes/overview/be-a-model-for-your-community
 (7) Do Not Spray (or Mow) sign: <https://tallgrassprairiecenter.org/signs>
 (8) CU Maurice River (NJ) Designation Program (Stream Friendly, Wildlife Friendly):
<https://www.cumauriceriver.org/conservation-wildlife/stewardship-program/>