

Pocket Meadows

by Betsy Washington

Oct. 14, 2023

What are Pocket Meadows?

Pocket meadows are small, native plantings inspired by the natural landscape. They offer the same ecological benefits of wild meadows, but on a smaller, more manageable scale. By assembling plants of similar physical environments, we can offer effective meadow habitat in our own backyards.

Plant Ecologist, Lisa Wagner, with NC says, *“The most important thing you could do as a gardener is to garden for wildlife, use plants that support our insects, and recreate an ecological web in your landscape to rebuild a sustainable habitat.”*

We consistently find that meadows attract the most butterflies and pollinators on our regional butterfly counts, even simple meadows with just a few species.

They are simply alive - full of movement, swaying grasses, wildflowers, light, buzzing of pollinators, flitting of songbirds and butterflies, lightning bugs and so much more.

Meadows are a planned, intentional, and maintained planting of native grasses and wildflowers that are commonly found in meadow and prairie plant communities. They offer the same ecological benefits of wild meadows but on a more manageable scale.

The most important thing is to create habitat by using native plants that support insects and the food web. I think all of us are familiar with Doug Tallamy and his work demonstrating this.

- 37% of all living organisms on land are herbivorous insects feeding directly on plants to capture energy from sun.
- 90% of those herbivorous insects are specialists able to feed only on a narrow group of plants with which they have evolved over eons.
- We all know the story of Monarch caterpillars and milkweeds, but how about Fritillaries and Violets. Or Viceroy and Willows, or Pearl Crescents and Asters?
- 96% of our songbird species feed their young only caterpillars and other soft bodies insects. One clutch of Chickadees needs over 6000 – 10,000 caterpillars until they fledge.
- And did you know that over 30% of our native bees are specialists too, depending on pollen from only a few plants to feed their young?

Even small pockets of natural plantings support and sustain biodiversity. Get out and take photos of what works, different seasons - and document the pollinators and wildlife using your meadow – keep a journal of when and what plants.

What distinguishes a Pocket Meadow from other small plantings?

- A balance of forbs and grasses or sedges
- No more than 2/3s of one or the other; it all depends!
- Plant densely and layer plant height, filling every niche including the groundcovers to create a living mulch to inhibit weeds

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- Grasses are pioneer species, tough, adaptable with deep roots, see above. Warm season or “bunch” grasses are the heart or matrix of a healthy meadow. They are late to sprout and grow best in warm temperatures above 75 degrees, so don’t make a big presence until June. They leave gaps between for herbaceous, blooming perennials. Many of our weeds, or fields left to their own devices have a lot of cool season European grasses or weeds, e.g. Kentucky Blue Grass, etc. that create a sod, leaving no room for flowering plants and that emerge early in spring, but go dormant by summer when temps rise.
- Roots- much more biomass underground with extensive and deep roots and massive fibrous roots, that can reach deep to tap into underground reservoirs of water, excellent at loosening soils, obtaining water from deep in ground and surviving extremes of drought, cold and hot, and surviving periodic fires and other disturbances. Roots are constantly dying and being renewed building and loosening soil, preventing erosion and runoff and allowing water to infiltrate soil and replenish aquifers.

Do you have a small strip of turf-grass or a parking strip that is struggling and requires constant maintenance? Or do you have an area with full sun, poor soil, and is hard to mow or maintain? Convert it into an ecologically diverse pocket meadow which can thrive in sunny, poor soils. This is a perfect spot for a Pocket Meadow!

Why plant a meadow instead of lawn area?

- No chemicals, pesticides or herbicides or fertilizers or weekly mowing. Eliminating toxic chemicals protects pollinators, wildlife, songbirds, pets and us
- Minimal disturbance and impact and support the whole web of life in contrast to a monoculture lawn of one or a few non-native species.
- Year round habitat.
- Deep roots and erosion control, runoff soak up, filtering pollution, holding water and letting it penetrate deep into reservoirs. Bioremediation.
- Bioremediation.
- Low maintenance once established. Burn or mow once a yr.
- Aesthetics, joy, experiential.
- “Simply by planting a native meadow, you will create significant wildlife habitat. In fact, you will create the most endangered type of habitat in N.A.” Your pocket meadow will soon be filled with movement, the sound of buzzing bees and beneficial insects, butterflies and more. As your native plants begin producing caterpillars and other insects, songbirds will set up nearby nests and take advantage of the birdie buffet, for their young and also for themselves, creating a balanced mini-ecosystem with few if any outbreaks of pests.

A meadow, even a pocket meadow, will shine in all seasons with a minimum of maintenance. If densely planted and niches filled you will have few weed problems once established and plants fill in, from spring to a bounty of summer and fall blooms to the luminous seedheads of grasses and their rich winter color, ice on seedheads, etc.

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How to Create a Pocket Meadow

- Pick an area with at least 6 hours of sun
- Soil - poor, challenging soils give the competitive advantage to warm season meadow plants instead of to cool season weeds.
- Disturb the soil as little as possible. No tilling which brings weed seeds to the surface.
- Do a good site assessment – is your soil moist, does it hold water after rains? Is it sandy and dries out rapidly after rain? How about weed pressure or noxious weeds?

Pollinators & other wildlife beneficial insects depend on regionally native plants. Meadows with diverse plantings of native plants support entire food chain. Caterpillars = baby bird food, supported for entire life cycle, as well as many beneficial and predatory insects that keep system healthy and balanced. Meadow is a “butterfly/pollinator” garden. No need for special garden!

Spontaneity and Changing Aesthetics – how can you not respond to a field of luminous grasses, waving gently in the breeze, intersperses with waves of colorful wildflowers and their pollinators? Changing through the seasons, and also from year to year depending on weather

Plant abundance will gradually evolve and change over time with some plants doing better than others. You can sit back and let nature take its course and enjoy the show, or you can manage and design by “editing” as Rick Darke promotes in his book “The Living Landscape”.

Decide “Style”

Plant in masses or “drifts” groups of 3 – 5+ different plants

Clearer groups creates more formal look

More naturalistic - blend plants use odd numbers 3 – 5- 7

Repetition – repeat dominant groups to lead the eye and create a rhythm. E.g a legible landscape
Repeating groupings or key plants unifies the garden

Plant Heights – typically taller in back or as a central ‘spine’

Place grasses first – consider them the backbone or “weft” of the garden tapestry – somewhat evenly distributed throughout.

Intersperse flowering plants

Try to have something of interest year-round or when you will use the garden

Think of plants that grow together in nature near you and emulate naturally occurring plant communities.

Prep and Planting:

Don’t till the soil – this tends to bring weed seeds that can persist in soil for decades to surface where they will germinate. River Farm and Pokeberries!

You may need to kill the existing sod or plants, especially if you have noxious, persistent weeds

Choose a site with full sun and lean, even **poor soil**

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Do NOT amend soil or rototill!

Eliminate lawn grasses and Weeds:

Smother small area with cardboard, thick layers of newspaper covered with mulch, etc. Can leave several months or over winter or can leave for a few months and plant directly through mulch and newspaper.

Alternatively, if a lot of noxious or invasive weeds, can treat with an herbicide such as Round-up Premium which is safe around wetlands and shorelines and lacks some of the most harmful ingredients. This may have to be repeated over a couple of seasons.

Or if turf-grass or bare, apply herbicide to area and wait two weeks, then reapply to any emerging vegetation or weeds. Wait at least two weeks then plant.

Planting:

For a small, pocket meadow it is often beneficial to plant **landscape sized plugs or even container plants**. This allows plants to establish quicker and allows you to design showier plants near paths or the front where viewed.

- They can be installed directly into mulch or planted through slits in the newspaper beneath. Even though we are striving for a living or green mulch to reduce future weeding or maintenance, at planting it may be helpful to apply mulch to discourage weeds while the plugs are filling in. The following year any gaps can be filled in.
- Right Plant, Right Place – following a good site assessment, choose NATIVE plants suited to your meadow
- Dense planting is best in your pocket meadow, with plugs or plants placed on 12” centers, except for particularly large plants such as Joe-pye weed, Switchgrass, False Indigo, etc.
- Each niche should be filled in - from the taller perennials and grasses, to a living green mulch of early bloomers and groundcovers to discourage weeds.
- Be sure you have planted living mulch or groundcover layers which will deter weeds and often provide evergreen interest in winter or spring blooms while the meadow is still mostly dormant
- E.g. Common Violets, Pennsylvania Sedge, ‘Lynnhaven Carpet’ Robin’s Plantain, or Wild Strawberry, Lyreleaf Sage, Golden Ragwort, Golden Alexanders, or even Wild Columbine
- Water well after planting and then leave except in prolonged drought. After a year your meadow plants should be established and you can leave them to their own devices.

Maintenance:

- An annual Mowing, Burning, or Cutting Back usually in late winter-early spring
- If you and your community can tolerate it, wait to cut back until birds and wildlife have nested and temperatures have reached 55 degrees so that insects overwintering in plant stems or debris have emerged.
- Periodic scouting and removal of any invasive or weedy species that emerge in your Pocket Meadow
- **Sit Back and Relax and Enjoy the Bounty of Beauty and Wildlife that Will Be Attracted to your Meadow**

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Meadow Resources and Literature
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- **Literature on Meadows:**
- Urban and Suburban Meadows – Catherine Zimmerman 2012
- Garden Revolution, Larry Weaner & Thomas Christopher 2016
- Planting in a Post Wild World, Thomas Rainer & Claudia West 2015
- Wildflower Meadow Book: A Gardener’s Guide - Laura C. Martin 1990
- Wild Ones, Native Plants, Natural Landscapes – www.wildones.org
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- **Plant/Seed Sources:**
- Ernst Seeds, Meadville, PA, www.ernstseed.com (seeds; some VA ecotypes, info on growing meadows from seed)
- North Creek Nursery, Landenberg, PA, www.northcreeknurseries.com (wholesale plugs, deep plugs)
- Mid-Atlantic Natives, Inc, Cobbs Creek, VA midatlanticnatives.com (wholesale plug trays, organic)
- Poplar Ridge Nursery, Warsaw, VA, www.poplarridge.com (grasses, plugs)
- Prairie Moon Nursery, Winona, MN, www.prairiemoon.com (seeds, plugs; growing meadows from seed)
- Roundstone Seed Company, KY, www.roundstoneseed.com (seeds and some regional ecotypes)
- Dug In Farms, White Stone, VA
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- **NN & Regional Native Plants:**
- Native Plants of the Northern Neck, Plant Native-Grow Native at NNNPS.org, 2013
- Wildflowers & Grasses of Virginia’s Coastal Plain, Helen Hamilton & Gustavus Hall, 2013
- Digital Atlas of the Virginia Flora, <http://www.vaplantatlas.org>
- Flora of Virginia, www.Floraofvirginia.org
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- **Pollinators & Wildlife**
- Attracting Native Pollinators, Protecting North America’s Bees and Butterflies. The Xerces Society. 2011.
- Storey Publishing, North Adams, MA.
- Bees an Identification and Native Plant Forage Guide. Heather Holm. 2017. Pollination Press, Minnetonka, MN. www.pollinatorsnativeplants.com
- The Bees in Your Backyard. A Guide to North America’s Bees. 2016. Joseph S. Wilson & Olivia Messinger Carril. Princeton University Press, Princeton, N. J.
- Bumble Bees of North America, An Identification Guide. 2014. Paul Williams, Robbin Thorp, Lefi Richardson, and Sheila Colla. Princeton University Press, Princeton, N. J.
- Gardening for Butterflies, How You Can Attract and Protect Beautiful Beneficial Insects. The Xerces Society, Timber Press, Portland, OR.
- Pollinators of Native Plants: Attract, Observe, and Identify Pollinators and Beneficial Insects with Native
- Plants. Heather Holm. 2014. Pollination Press, Minnetonka, MN. www.nativeplants.com
- <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/plantsanimals/pollinate/help>

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- <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/plantsanimals/pollinate/farmers>
- <http://www.humanegardener.com/how-to-really-save-the-bees/>
- The Humane Gardener, Nancy Lawson. Princeton Architectural Press, NY, NY. 2017.
- <http://www.humanegardener.com/the-book/>
- Humane Gardener Blog - <http://www.humanegardener.com>
- www.bugguide.com - Iowa State Univ. Online Identification Help and other great sections
- <http://www.discoverlife.org/> - American Natural History Museum Interactive Guide to Eastern North American bees.
- www.Xerces.org – Loads of resources on pollinator conservation including: Monarchs, Bumblebees...
- <http://pollinator.org/beesmartapp.htm> - **Use Bee Smart™ Pollinator Gardener** to browse through a database of 1,000 native plants, according to pollinators you want to attract, light and soil requirements, bloom color, and plant type.
- <https://video.search.yahoo.com/search/video?fr=yymy-t-999&p=sam+droege+bees#id=2&vid=c8337212549d9c9c78236083e0a87818&action=click>
- Ted Talk on Bees, Wilding your Land: Blessing of the Bees
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