

Pocket Meadows: Small spaces with huge impacts



Pocket Meadows: Small spaces with huge impacts.

The mere thought of a meadow is soothing and brings to mind images of visual poetry that few environments can conjure.

While walking through a forest can bring on a sense of foreboding and mystery, walking through a meadow is sure to bring on a sense of graceful harmony, serenity and peace of mind.

These feelings, just as our fear of snakes, are so intrinsic that they likely served an evolutionary purpose and are part of our genetic makeup. It also seems that it doesn't take a lot to trigger us. You do not need to be Indiana Jones-ed down into a snake-infested chamber to have a total meltdown. A tiny garden snake will generate the same visceral reaction to the most sensitive among us. Ditto with meadows; it is not the size that matters.

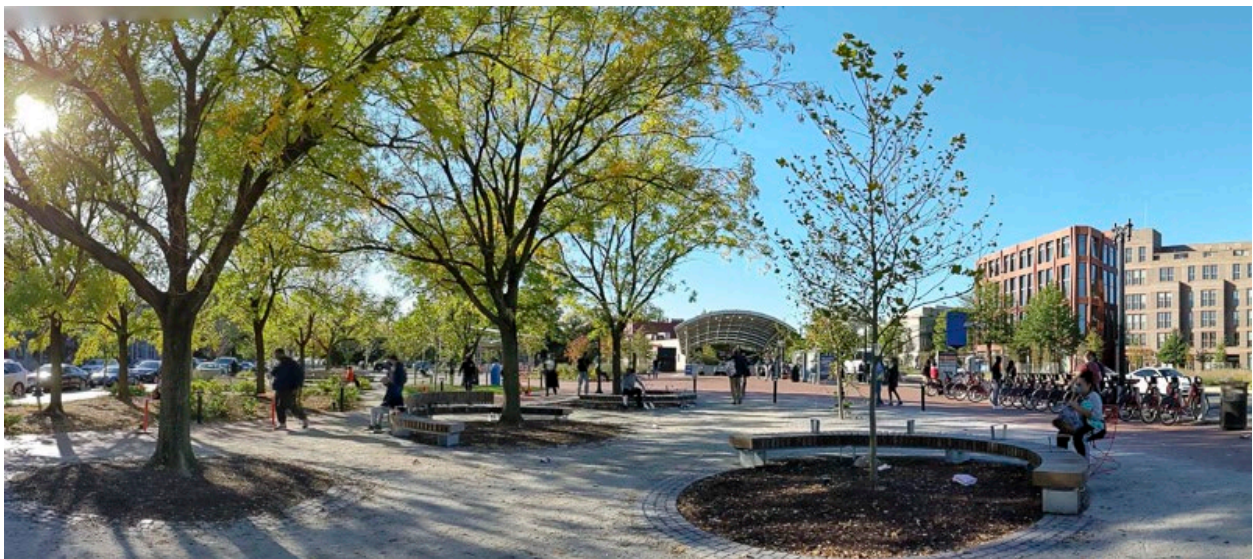


Schizachyrium scoparium (little bluestem) buffer.

Pocket meadows can create influential buffers in our increasingly urbanized environments and the effects can be stunning. I recently went back to the Eastern Market neighborhood in Washington, DC, where I had worked as a photographer for over twenty years. Although only seven blocks away from the U.S. Capitol, the area was far from glamorous. Boarded-up townhouses dotted the neighborhood which, as a whole, was better known as a symbol of urban blight and decay than for its historic architecture and charm.



Eastern Market Metrorail Station entrance, Washington DC, circa 1990. Photograph courtesy of the Library of Congress, Historic American Buildings Survey.



Eastern Market Metrorail Station entrance, Washington DC, October 2021.

L'Enfant's original design for the new federal city, proposed during President Washington's administration, included circles and rectangular plazas to provide open space where grand avenues would intersect. Sitting on Pennsylvania Avenue, with a direct line of sight to the U.S. Capitol building, the Eastern Market Metro Park is such a plaza. And, aside from the Metro entrance added in the seventies, the plaza has remained essentially unchanged for over two hundred years. However, if L'Enfant expected the plaza to be used for anything other than a crossroads, those good intentions became lost amid the modern expanses of hard pavement and the neglect of the soft areas.



Concept plan for the redevelopment of Eastern Market Metro Park, Washington DC.

Fast forward to 2013. The District of Columbia Department of Parks and Recreation, in collaboration with other government entities, committed to transform what is now the Eastern Market Metro Park area "into a safe and thriving 'Town Square' that supports multi-generational social activities for the historic Capitol Hill community." The proposal goes on to state, "The District will be pursuing its first ENVISION certification from the Institute for Sustainable Infrastructure, and demonstrate our continued commitment to building a sustainable future." The project broke ground in 2018 and is now nearing completion.



Post renovation, the lawn adjacent to the playground has become a functional space.

When I first saw the upgraded plaza, I was shocked in the best possible way. I remembered it as a cold and desolate space into which people ventured only out of necessity and crossed hurriedly on their way somewhere else. New permeable pavers and gravel paths were laid out in pleasing and welcoming patterns. Trees and man-made canopies now provide shelter from the sun and along with the benches, tables and chairs underneath have created an environment where lingering is a pleasure. The new playground and adjoining patch of lawn are filled to capacity. The sidewalks are busy with dog walkers and baby strollers and are no longer the exclusive realm of frantic commuters.



Pocket meadow with line of sight to the U.S. Capitol Building. Pennsylvania Ave at 8th St, SE.

Key to the success of this project are the pocket meadows. These mixed plantings of native flowering herbaceous perennials and grasses, swaying and glistening in the fall sunlight, are more than just facsimiles of nature designed to satisfy our aesthetic desire to be surrounded by pretty plants. They are also more than just another element used in green infrastructure to reduce water runoff or deter jaywalking. Despite their small size, these meadows are the buffer between you and the hard urban landscape and vehicular traffic. They are responsible for giving you a sense of comfort that wouldn't be possible otherwise.

So, what is a meadow in the first place and how is a pocket meadow different from any other planting including a pollinator garden for example?



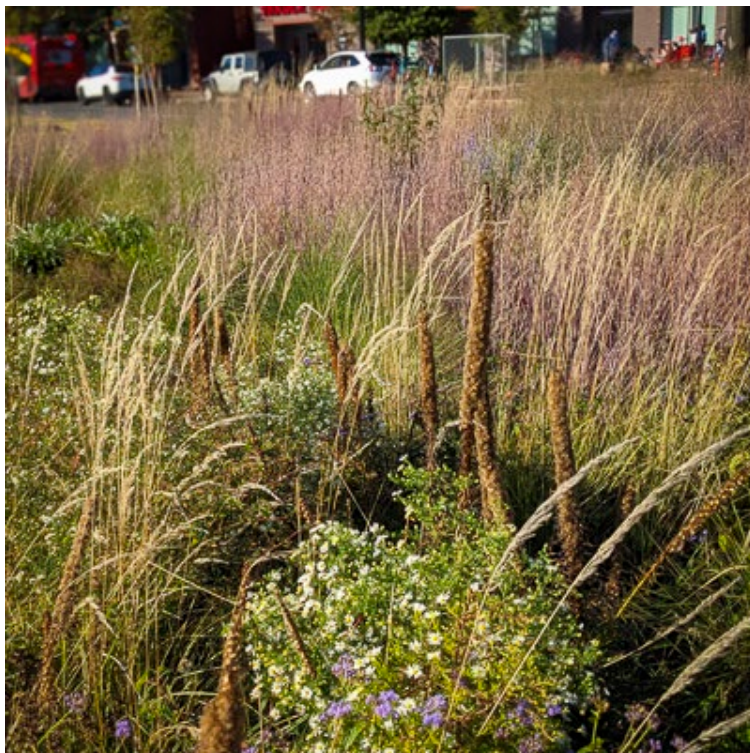
Upper meadow, Native Flora Garden at the Brooklyn Botanic Garden, Brooklyn, NY. Photograph courtesy of Uli Lorimer.

As per Wikipedia, "A meadow is an open habitat, or field, vegetated by grasses, herbs, and other non-woody plants.". The inclusion of grasses is an important part of the definition. Grasses are also what differentiate a pocket meadow from a typical pollinator garden which basically is a rebranding of the Old World cottage garden. Focusing on flowering herbaceous perennials (technically called forbs) is only one part of the ecological puzzle. In human terms, it is like a highway exit with fast food restaurants but little else to sustain a thriving community. Grasses are an essential piece of the ecological puzzle; they serve as host plants for certain types of insects and provide critical winter shelter for

others. These are critical services that cannot be sustained by forbs alone, and without them, many of our native bees and butterflies cannot survive.



Muhlenbergia capillaris (pink muhly grass) shimmering in the fall sunlight. Pennsylvania Ave, SE, pocket meadow.



Liatris spicata (dense blazing star) and **Symphyotrichum sp.** (asters) provide late season interest among the grasses.

From a practical standpoint, again due to the inclusion of grasses and going beyond the aesthetic benefit of having four seasons of interest, pocket meadows

will amend the poorest of soils over time and are the first step in restoring damaged soil ecology. The deep roots of these plants will sequester carbon several feet down into the soil. Every winter up to 75% of these roots will die back and in the process enrich the soil with organic matter and create deep pathways for water, oxygen, nutrients and microorganisms that are all essential components of a healthy soil ecology. These are the same processes that resulted in our midwestern prairies building exceptionally fertile soil for cultivation.

Speaking of prairies, why not call these plantings pocket prairies? For starters, the term meadow applies to both disturbed and undisturbed environments whereas the term prairie should only be applied to undisturbed systems. Secondly, prairies are extremely complex and their remnants are now among the rarest and most endangered ecosystems on the planet. Applying the term pocket prairie to the type of plantings described here would be akin to putting a tree in a planter and calling it a pocket forest. Not entirely incorrect, but quite a stretch.

The term, pocket meadow, is relatively new with the earliest references only going back a handful of years.



A variegated Fritillary nectaring on *Symphotrichum ericoides* (white heath aster) was among many other pollinator insects observed.

However the notion that even small native plantings help sustain biodiversity is now well established. This is in large part thanks to the work of Dr. Doug Tallamy and the broad influence of his book *Bringing Nature Home*. To grossly misquote him, "Plant it and they will come" summarizes an aspect of his ongoing research

that shows that native insects and pollinators will find their way towards native plants even when they are growing in isolation. Rewilding rural areas is important, but the combined patchwork of urban strips and yards that is currently used for growing turf grass and other ecologically useless non-native plants offers tremendous opportunities to move towards a more sustainable model for green infrastructure.

A point sometimes overlooked by the public at large is the social impact of introducing even small green spaces into our increasingly urbanized landscapes.

I'm not referring to the inevitably trampled patches of turf grass or those sad flower beds with isolated plants struggling to survive amid seas of mulch. Those are more depressing than anything and their impact is surely contrary to any possible intended original purpose.



Dr. Annabel Renwick, Curator of the Blomquist Garden of Native Plants, Sarah P. Duke Gardens, Durham, NC.

During a recent visit to Duke Gardens in Durham, NC, organized by the Perennial Plant Association, we had the pleasure of being guided by Dr. Annabel Renwick, Curator of the Blomquist Garden of Native Plants, Sarah P. Duke Gardens. After showing us a one-acre rendition of a native grassland - created with almost 100 species of local ecotype wildflowers and grasses totaling 20,000 plants that took over four years to construct - Dr. Renwick led us to a more humble project: a divider strip in one of Duke University's faculty parking lots.



Meadow at the Blomquist Garden of Native Plants, Sarah P. Duke Gardens, Durham, NC.

The sales pitch was simple enough: convert a strip of turf grass that was struggling and required constant maintenance into a resilient, ecologically functioning pocket meadow using some of the plants collected for the native grassland project. The powers that be at the university were sold, and the planting moved forward.

It was determined that under these circumstances it would be safe to apply "the herbicide" that shall remain unnamed to prep the strip. Two weeks later plugs were installed directly through the duff. Some mulch was added to keep the edges clean and help the plants establish. The following year gaps were filled in using a combination of native species and compact native cultivars deemed more appropriate for the site than their parent species.



Perennial Plant Association members touring a pocket meadow installation. Duke University faculty parking lot, Durham, NC.



The presence of grasses adds structure and visual interest that will persist long after the growing season has ended.

Other than that, the strip was left to its own devices. Now ending its second growing season, the experiment has been declared to be a success. The selected plant combination ensures visual interest through all four seasons, is able to withstand the searing summer heat of a shadeless North Carolina parking lot without supplemental watering, attracts countless pollinator insects and, last but not least, is a little patch of happiness for those who use the lot. It is not often that an institutional plant installation receives unsolicited praise, but this pocket meadow has generated plenty of it. Functioning equally as public art, it inspires and takes the mind to another place, even if for just a brief moment out of a daily routine. In fact, the project is so successful and the feedback so positive that the university is considering broadly expanding this approach to other areas on the campus.

These two examples of pocket meadows are indicative of a changing perspective.

If Washington, DC - well known for its layers of red tape to get anything accomplished, has been willing and able to embrace the use of native plants and implement green infrastructure projects - there is hope that other municipalities will be able to do the same.



Pocket meadow on a median strip.

There are plenty of opportunities for individuals as well. Start small. Hell strips - the strip between a road and a sidewalk where nothing seems to want to grow - are areas where tough plants can thrive and make a difference. Lawns are great places to start too. According to Dr. Tallamy, we maintain a combined 40 million acres of lawn, which is a larger area than all the National Parks put together. You do not need to convert an entire lawn. In their book *Gardening in a Post-Wild World*, Thomas Rainer and Claudia West suggest that you think of lawn as an area rug, not wall-to-wall carpeting. Make it easy on yourself and focus on a small patch. It can always be expanded. Talk to your friends and neighbors, and educate them about the value of native plants... and maybe talk them into starting a pocket meadow of their own.



Summer view of a pocket meadow in Lincoln, NE. Photograph courtesy of Benjamin Vogt / monarchgard.com



Autumn view of a pocket meadow in Lincoln, NE. Photograph courtesy of Benjamin Vogt / monarchgard.com

POCKET MEADOWS IN FULL SUN: GUIDE AND PLANT CHART

Pocket meadows are scaled-down versions of meadows and, among many possible applications, are useful for meeting some green infrastructure requirements. Choosing the right plants for the right place is critical for the success of any project. Herein we will be offering basic guidelines for establishing a pocket meadow in full sun and a chart of recommended plants to use as a baseline. These plants were also selected for possible use in public spaces where a clear line of sight must be maintained and have therefore, with some exceptions, focused on plants of low to medium height.

POCKET MEADOWS

What differentiates a pocket meadow from many other small residential, urban, and green infrastructure plantings is the balance between forbs (flowering herbaceous perennials) and grasses. An ideal mix should include no more than $\frac{2}{3}$ of either. Other considerations include a dense layout and layered plant height to create a green mulch that will help inhibit weeds and improve soil moisture retention.

GROWING REQUIREMENTS

An underlying characteristic of meadows is that they occur - naturally or not - in open areas and are therefore exposed to full sun. Soil moisture may vary, but this introduction focuses on pocket meadows for full sun and poor, dry soil. These conditions are often found in residential and commercial developments that lack trees and where the topsoil has been removed. This is also typical of most hell strips: the area between a road and a sidewalk where no plants tend to survive.

PLANTING ADVICE

For a pocket meadow to be resilient and effective, it should be densely planted. Our recommended basic spacing is 12" on center, possibly farther apart for the larger plants and closer together for the shorter ones. The plants listed in this chart are adapted to difficult conditions, but can be killed through kindness. We do not recommend amending the soil with organic matter, because a rich environment can lead these plants to grow too tall and weak. An initial layer of mulch can be helpful to keep weeds down and soil moisture levels up during the initial establishment period. Once planted, the meadow should be thoroughly watered to eliminate air gaps in the soil. Beyond that, these plants should be left to their own devices, and only watered if you experience extraordinarily dry conditions within the first year of planting.

Read more about pocket meadows here: izelplants.com/blog/pocket-meadows/

Forbs for Pocket Meadows in Full Sun	Common Name or Cultivar Name	Zone	Bloom Color	Height		Season of Interest				Bloom Time			Exposure			Moisture		
				Plant	In Bloom	Spring	Summer	Fall	Winter	Spring	Summer	Fall	Sun	Part-Sun	Part-Shade	Dry	Moist	
<i>Agastache foeniculum</i>	anise hyssop	3-7		2'-3'	3'-4'													
<i>Asclepias tuberosa</i>	butterfly milkweed	4-10		1'-2'	2'-3'													
<i>Asclepias verticillata</i>	whorled milkweed	3-10		1'-2'	2'-3'													
<i>Callirhoe involucrata</i>	purple poppymallow	4-9		6"-12"	6"-12"													
<i>Coreopsis verticillata</i>	'Zagreb'	4-9		6"-12"	12'-18"													
<i>Echinacea purpurea</i>	eastern purple coneflower	4-8		2'-3'	4'-5'													
<i>Eupatorium hyssopifolium</i>	hyssopleaf thoroughwort	5-8		1'-2'	2'-3'													
<i>Oenothera fruticosa</i>	narrowleaf evening primrose	4-9		1"-3"	1'-2'													
<i>Penstemon digitalis</i>	foxglove beardtongue	4-8		3"-6"	3'-5'													
<i>Penstemon digitalis</i>	'Husker Red'	4-8		3"-6"	3'-5'													
<i>Pycnanthemum tenuifolium</i>	narrowleaf mountainmint	4-8		1'-2'	2'-3'													
<i>Rudbeckia hirta</i>	blackeyed Susan	3-10		1'-2'	2'-3'													
<i>Rudbeckia triloba</i>	browneyed Susan	4-8		2'-3'	3'-5'													
<i>Solidago nemoralis</i>	gray goldenrod	3-8		1'-2'	1'-3'													
<i>Solidago odora</i>	anisescented goldenrod	4-10		2'-3'	3'-4'													
<i>Symphotrichum georgianum</i>	Georgia aster	4-9		1'-2'	1'-3'													
<i>Symphotrichum oblongifolium</i>	aromatic aster	4-8		1'-2'	2'-3'													
<i>Symphotrichum oblongifolium</i>	'October Skies'	4-8		6"-12"	1'-2'													
<i>Symphotrichum oblongifolium</i>	'Raydon's Favorite'	4-8		1'-2'	2'-3'													

Grasses for Pocket Meadows in Full Sun	Common Name or Cultivar Name	Zone	Bloom Color	Height		Season of interest				Bloom Time			Exposure			Moisture		
				Plant	In Bloom	Spring	Summer	Fall	Winter	Spring	Summer	Fall	Sun	Part-Sun	Part-Shade	Dry	Moist	
<i>Andropogon ternarius</i>	splitbeard bluestem	5-10		2'-3'	3'-4'													
<i>Andropogon ternarius</i>	'Black Mountain'	5-10		2'-3'	3'-4'													
<i>Eragrostis elliottii</i>	field lovegrass	6-9		1'-2'	2'-3'													
<i>Eragrostis spectabilis</i>	purple lovegrass	4-10		8"-12"	1'-2'													
<i>Muhlenbergia capillaris</i>	pink muhly grass	5-10		1'-2'	2'-3'													
<i>Muhlenbergia reverchonii</i>	seep muhly	6-10		1'-2'	2'-3'													
<i>Muhlenbergia reverchonii</i>	'Undaunted'	6-10		6"-12"	1'-2'													
<i>Schizachyrium scoparium</i>	little bluestem	3-10		1'-2'	3'-4'													
<i>Schizachyrium scoparium</i>	'Blaze'	3-9		1'-2'	2'-3'													
<i>Schizachyrium scoparium</i>	'Standing Ovation'	3-10		1'-2'	2'-3'													



Izel Native Plants

izelplants.com
 hello@izelplants.com
 410.989.3721

© Izel Plants, LLC Updated 11/10/21