

Pollinator Kits

Fall 2023 Native Plant Sale



Thank you for purchasing a pollinator kit at the Fall 2023 Native Plant Sale for the benefit of Wild Ones Middle Tennessee Chapter and Owl's Hill Nature Sanctuary.

This pollinator kit will function best when the plants are in Full Sun (meaning six or more hours of direct Sun per day when the plants are active). The following guidelines should help you get started with planting your pollinator kit.

Where to Begin

How Much Area?

The first step here will be to decide how large of an area you need to support the plants. The info sheets used at the plant sale are included at the end of this document for each of the plants in the kit. These sheets include the spread of the plant which is the diameter of the plant when fully grown. Since plants vary within a species, many of these spreads are listed as a range.

The standard nursery industry method for total area is to take the spread of each plant, square it, and add them all up. If you do that for the maximum spread of each plant you come up with about 117 ft² and if you use the average spread for each plant you'll get about 73 ft².

The above rule of thumb does not necessarily have to be followed with native plants. For example, you may choose to space your plants farther apart to let them fill in the openings through seeding and/or vegetative growth (lateral roots giving rise to new plants). The extra space between plants will require more weeding initially, but ultimately you will have a larger massing effect. On the other hand, if you place your plants closer together, there will be less weeding in your future but with fewer total plants.

Flower Constancy

The concept of flower constancy has been observed for several pollinators where floral visits are restricted to a single species across a day. Honeybees, bumblebees, and some butterflies have been observed with this behavior. What this means in the garden is that individual species of plants should be grouped together when possible. If an individual plant is isolated, a pollinator may not see enough blooms to make a visit worthwhile. Exceptions to this non-isolation suggestion are plants like Asters and Anise Hyssop which have enough blooms per plant to appear as a massing. Instead of thinking of your pollinator kit as 18 different plants, think of it as 8 different species. For cases where

there are 3 plants in a species, plant them in a triangle or other adjacent configuration.

Continuous Bloom

Ideally, a pollinator garden will offer blooms for pollinators continuously throughout the season. One way to check for this is to create a bloom chart that shows graphically when each different species blooms. See the chart below. Bloom data for this chart was mined from iNaturalist using observations in Tennessee in 2020-2022. So this range is species-wide. Likely, no one plant would bloom this long, but collectively the species should. Also, the dates vary year-to-year due to

many factors. The bloom chart illustrates how plants can be selected that have overlapping bloom periods.

No single plant can fulfill the needs of all pollinators, so the plant selection process can be more complicated than simply ensuring a continuous bloom, but the bloom chart is a good start.

Pollinator Kit Bloom Chart

| Common Name | Scientific Name | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov |
|------------------------|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Longsepal Beardtongue | <i>Penstemon calycosus</i> | | █ | | | | | | |
| Purple Coneflower | <i>Echinacea purpurea</i> | | | █ | █ | █ | | | |
| Bee Balm | <i>Monarda fistulosa</i> | | | █ | █ | █ | | | |
| Anise Hyssop | <i>Agastache foeniculum</i> | | | █ | █ | █ | | | |
| Clustered Mountainmint | <i>Pycnanthemum muticum</i> | | | | █ | █ | █ | | |
| New England Aster | <i>Symphotrichum novae-angliae</i> | | | | █ | █ | █ | | |
| Wrinkleleaf Goldenrod | <i>Solidago rugosa</i> | | | | | | █ | | |
| Smooth Aster | <i>Symphotrichum laeve</i> | | | | | | | █ | |

Other Design Considerations

In addition to keeping like species together as mentioned above, another layout consideration concerns plant height. There isn't much variation in the height of the plants in the pollinator kit, but potentially taller plants are New England Aster, Foxglove Beardtongue, and Purple Coneflower. So, if the garden will be viewed primarily from one side, the taller plants would normally go in the back. If the garden is viewable from all sides, then place the taller ones in the middle. Pulling together these ideas, one possible design for an 8-foot by 16-foot garden located along a wall or fence is illustrated on the next page.

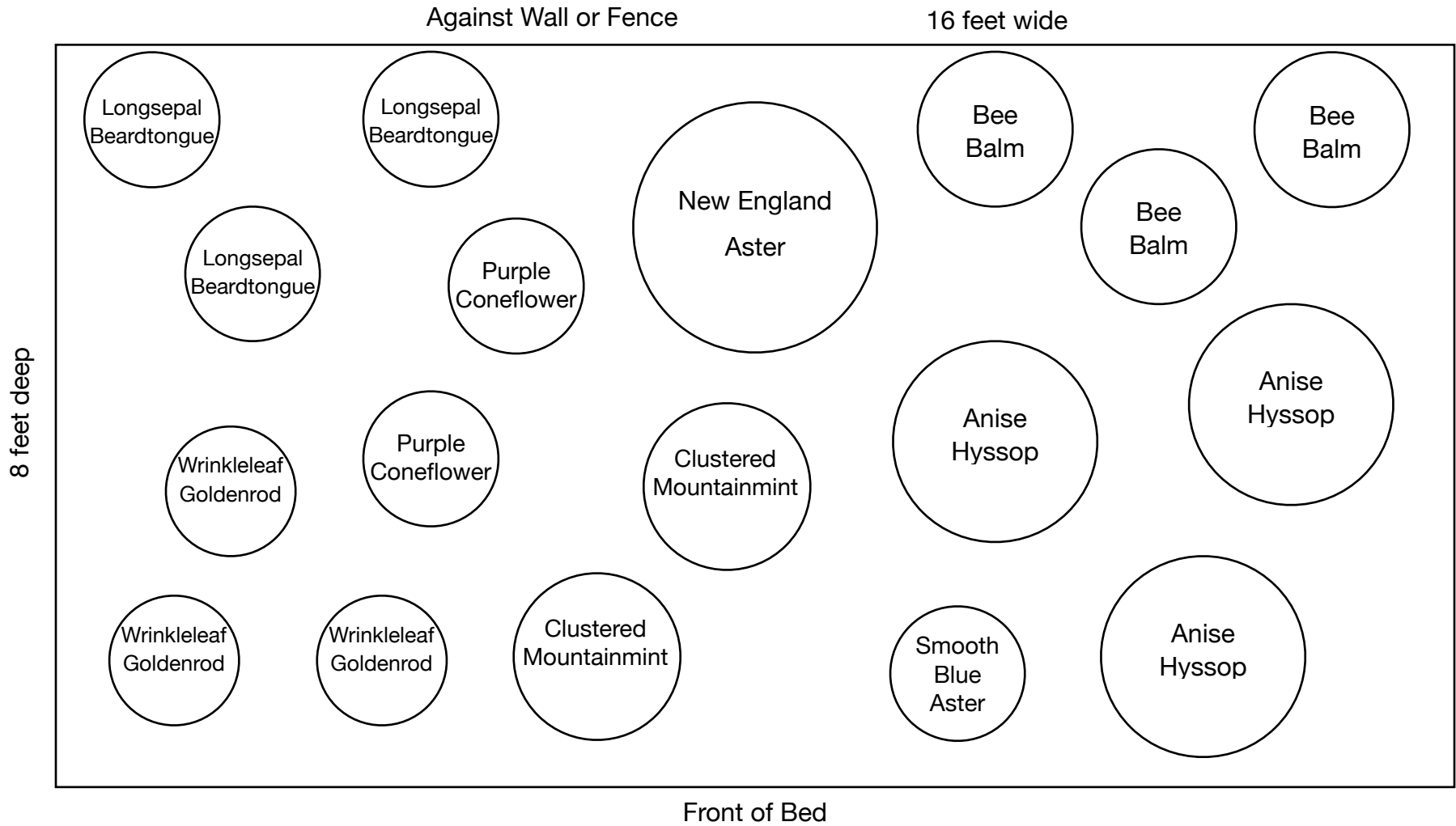
The Steps

1. Select location and size of garden
2. Remove all vegetation (this step is important to remove competition with other plants)
3. Select where the plants go. Some people arrange the pots onsite until they have what they want.
4. Install plants, being careful to not get them too low. If you leave them just a little higher than grade, then you can add mulch to have them blend. The mulch will help minimize weeds.
5. Water the plants often at first, as needed.
6. Check periodically for weeds. It is important to remove competition.
7. In the future, you can decide how much you want to let the plants to spread.

Pollinator Kit Details

| Common Name | Scientific Name | # | ht. | sprd. | Bloom (from iNat for TN) |
|------------------------|-------------------------------------|-----------|-------|-------|-----------------------------|
| Longsepal Beardtongue | <i>Penstemon calycosus</i> | 3 | 3-5 | 1.5-2 | late Apr to mid Jun |
| Purple Coneflower | <i>Echinacea purpurea</i> | 2 | 2-5 | 2 | late May through early Sep |
| Bee Balm | <i>Monarda fistulosa</i> | 3 | 3-4 | 1.5-3 | early Jun through early Sep |
| Anise Hyssop | <i>Agastache foeniculum</i> | 3 | 2-4 | 2-3 | mid Jun through late Sep |
| Clustered Mountainmint | <i>Pycnanthemum muticum</i> | 2 | 2-3 | 2-3 | Jul to late Sep |
| Wrinkleleaf Goldenrod | <i>Solidago rugosa</i> | 3 | 0.5-2 | 0.5-2 | Aug through Sep |
| New England Aster | <i>Symphyotrichum novae-angliae</i> | 1 | 3-6 | 2-3 | Jul through Sep |
| Smooth Blue Aster | <i>Symphyotrichum laeve</i> | 1 | 2-4 | 1-2 | Sep through Nov |
| Total | | 18 | | | |

Sample Plant Layout



Long-sepal Beardtongue

Penstemon calycosus



Richard Hitt

| | |
|------------|---|
| Family | Plantaginaceae (Plantain) |
| Height | 3 to 4 feet |
| Spread | 1.5 to 2 feet |
| Bloom Time | Late April to June |
| Flower | Lavender |
| Light | Full sun, tolerates light shade |
| Water | Dry to medium |
| Soil | Average |
| Notes | Genus name comes from Greek words that mean five stamen (four fertile, one sterile but hairy), hence 'beardtongue.' |

Smooth Blue Aster

Symphyotrichum laeve



R.W. Smith

Great for Gardens

This Aster is a good performer in the garden setting. It has beautiful flowerheads and attractive smooth foliage with clasping leaves. The stems usually remain erect without support.

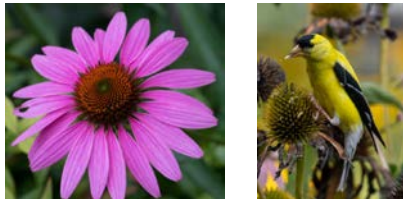
| | |
|------------|---|
| Family | Asteraceae (Aster) |
| Height | 2 to 4 feet |
| Spread | 1 to 2 feet |
| Bloom Time | September to Nov. |
| Flower | Purple (varies), showy, 1.5 inches, good cut |
| Light | Full Sun, likes some afternoon shade |
| Water | Dry to medium |
| Soil | Average |
| Notes | Easily self-seeds. Tolerates clay soil. Host to Pearl Crescent butterfly and others. Outstanding for pollinators. |

Purple Coneflower

Echinacea purpurea



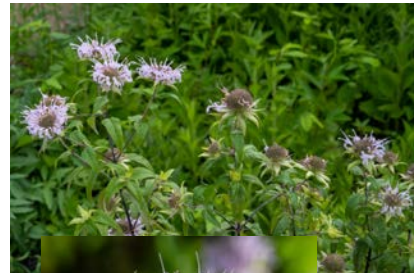
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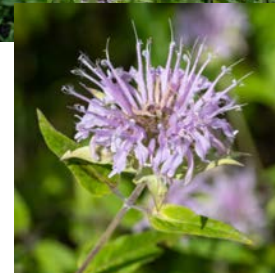
| | |
|------------|---|
| Family | Asteraceae (Aster) |
| Height | 2 to 5 feet |
| Spread | 1.5 to 2 feet |
| Bloom Time | Late May to early Sept. |
| Flower | Pink or purple, showy |
| Light | Full Sun to Part Shade |
| Water | Dry to medium |
| Soil | Average |
| Notes | Easily grown in average soil; best in full sun. Tolerates heat, draught and poor soil. Clumps should be divided when overcrowded (3-5 years). Host for Silvery Checkerspot butterfly. |

Bee Balm, Wild Bergamot

Monarda fistulosa



Richard Hitt



| | |
|------------|---|
| Family | Lamiaceae (Mint) |
| Height | 2 to 4 feet |
| Spread | 2 feet |
| Bloom Time | May to August |
| Flower | Pink, lavender |
| Light | Full sun to part shade |
| Water | Dry to medium |
| Soil | Various |
| Notes | Tolerates poor soil and some drought. Subject to powdery mildew, so good air circulation is important. Leaves can be used in tea. Frequented by bees. |

Anise Hyssop

Agastache foeniculum 

Richard Hitt



| | |
|------------|--|
| Family | Lamiaceae (Mint) |
| Height | 2 to 4 feet |
| Spread | 1.5 to 3 feet |
| Bloom Time | Late May to September |
| Flower | Blue, Showy |
| Light | Full Sun to Part Shade |
| Water | Dry to medium |
| Soil | Average |
| Notes | While its native range is north of TN, this plant really performs well here with its long bloom time and popularity with many pollinators. The anise-scented leaves repel mammals. |

Clustered Mountain Mint

Pycnanthemum muticum 



Stephanie Brundage



Richard Hitt

| | |
|------------|---|
| Family | Lamiaceae (Mint) |
| Height | 2 to 3 feet |
| Spread | 2 to 3 feet |
| Bloom Time | July to September |
| Flower | Pink, showy |
| Light | Full sun to part shade |
| Water | Dry to medium |
| Soil | Average |
| Notes | A top pollinator magnet that attracts butterflies, bees, wasps, flies, and more. Leaves have a pleasant mint aroma. |

New England Aster

Symphyotrichum novae-angliae 



James L. Reveal

| | |
|------------|--|
| Family | Asteraceae (Aster) |
| Height | 3 to 6 feet |
| Spread | 2 to 3 feet |
| Bloom Time | June to October |
| Flower | Purple (varies), showy, 1.5 inches, good cut |
| Light | Full Sun |
| Water | Medium |
| Soil | Easily grown in average soil |
| Notes | Tolerates clay soil. Host to Pearl Crescent butterfly and others. Can self-seed. |

Gray Goldenrod

Solidago nemoralis 



R.W. Smith

| | |
|------------|--|
| Family | Asteracea (Aster) |
| Height | 0.5 to 2 feet |
| Spread | 0.5 to 2 feet |
| Bloom Time | August to September |
| Flower | Yellow |
| Light | Full sun |
| Water | Dry to medium |
| Soil | Average to rich |
| Notes | Will tolerate light shade. Plant will spread in the garden by seeds and rhizomes. Does not cause hay fever. Tolerates deer, clay soil, wet soil. |