Best-Behaved Kit

2023 Owner’s Manual

Five native species that bloom from Spring to Fall to provide beauty in your yard and critical habitat for pollinators

Great Swamp Watershed Association Native Plant Program 2023
Kit Contents

Your 25-plant plug kit includes five species that thrive in sunny gardens (6 hours of sun per day minimum) and moist conditions.

The kit includes:

- Columbine, *Aquilegia canadensis*, 5 plugs
- Dense Blazing Star, *Liatris spicata*, 5 plugs
- Purple Coneflower, *Echinacea purpura*, 5 plugs
- Tall Anemone, *Anemone virginiana*, 5 plugs
- Wild Quinine, *Parthenium integrifolium*, 5 plugs

**Important:** Once you get home, check to see if your plugs need water. Keep their soil moist to the touch (but not soaked) until you are able to plant them in the ground.
Designing your garden: Sample Design

Can be used as is or easily modified to fit your chosen space and your gardening goals.

**Design Considerations**

*Your Landscaping Style*

These plants can fit any style from a formal garden to a naturalistic garden (like this design) to a wild garden with clumps. Pollinators will be equally happy with any of these.

*Your Garden*

This design can be easily altered to fit a deeper, wider, or curved garden bed. These designs use moderate 10-12-inch center-to-center plant spacings to easily fill a 80 or 50 square foot area. The goal is to eventually have plants pressing shoulder to shoulder for easier maintenance. Tightly spaced plants create a “green mulch” reducing the opportunity for weeds to sprout so that annual mulching is no longer required. You can choose to plant on a tighter spacing. A larger spacing will require more maintenance and mulching to manage weeds, until plants establish.

*Add On!*

These species can be planted alone or can be combined with other sun-loving kits or your favorite individual species to make a larger planting.
Site Preparation

Know your sun, moisture, and soil conditions

The plants in the Best-Behaved Kit need 6 hours of sunlight per day but more sun is always better.

These species grow well in average conditions. You may need to water your plants during dry summer periods during the first season, after that they should only need watered during drought. Once their roots are established, they will generally not suffer permanent damage even without watering.

These native plants are selected for the clay-silt-loam soils typical for our piedmont or highlands region.

Prepare the bed

If planting in a prepared bed, remove grass and any other unwanted plants that may compete with your new native garden while establishing. Minimize soil disturbance.

To prepare a new native plant bed replacing previous plantings:

Sheet mulching is a great way to start! It is a back-saving “no-dig” strategy that kills unwanted weeds and grass by blocking out sunlight, allowing everything to die and decompose, minimizing soil disturbance and avoiding stirring up the weed seed bank.

- Mow the area you’d like to transform. Use a garden hose or a length of rope to create the garden outline.
- Cover the area with tapeless clean cardboard or 5 to 8 sheets of newspaper (don’t use glossy pages.) Overlap the edges to prevent gaps so that the turf is solidly covered. Wet down as you go.
- Cover cardboard with 3-4” of composted mulch. No soil amendments, no fertilizer. Native plants grow best in simple, nutrient poor soils.
- Poke many small holes through the cardboard to maintain rainwater infiltration.

During spring and summer, this will take at least a month, usually two, to kill enough weeds and turf. Dig spot planting holes straight through to plant plugs.

For more information, go to The Lasagna Method (Sheet Mulching) on or resources page.

If not planting immediately

- Keep plugs in a sheltered spot with enough sun and protect from frost/wind.
- Keep them moist but do not over-water.
- Trim plants back to 6-12” and pinch off flowers if they will not be planted for more than a month. With proper care, landscape plugs should stay healthy for many weeks.
Planting your plugs

- The only tool you need is a garden knife, trowel, or lightweight one hand pick.
- Extract each plug gently from its socket. Squeeze the sides to loosen. Push up from the bottom or use a narrow spatula to ease the plug out. Avoid pulling on the plant stem!
- Lay out where you want to place each plug. Dig a hole large enough for the plug.
- Plant so the top of the plug is even with the top of the soil. Tamp soil firmly.
- Water the plugs in well.

Pollinator Garden Management

Native plants are low maintenance, but every garden requires management.

Over-watering can be harmful. Through the first year, water them when the soil surface is dry. The second year and beyond you should only need to water during a drought.

Insects may chomp on plants, but these plants are larval hosts to butterflies and plants will recover.

Undesirable insects like Japanese beetles or aphids may become a problem. Find a caterpillar-safe way to mitigate the problem (Rutgers agricultural extension hotline can help). Even “organic” insecticides can kill desirable insects like Monarch caterpillars or butterflies.

- Healthy pollinator gardens host beneficial insects like ladybugs that eat pests.
- Mechanical removal, eg. spraying, wiping, or picking off large bugs works well.

Deer may also chomp some of these plants. Some species are more deer resistant than others.

- Plants are most palatable when young and don’t have deep roots to recover.
- Organic deer repellents successfully repel deer and rabbits but require re-applications
- Cages and fences can be effective physical barriers but check local ordinances.
  - Deer fences should typically be 7-8’ tall but for small exclosures 5’ is effective.

Shortening up giants. If your soil is rich, tall-growing bushy plants may grow taller than wanted and can flop over. Avoid this by cutting back by ⅓-½ from Memorial Day to July 4th to shorten plant height.

A slightly messy garden is the best habitat! Leaving the stalks through the winter provides food and shelter for wildlife as well as visual interest. Cut the stalks in early spring after insects are active. In the fall, leave the autumn leaves to protect overwintering pupae and firefly eggs in your yard. The leaves decompose, enriching the soil, but ensure they are removed in the spring to protect basal rosettes.

Monitor your garden as it changes. Remove invasive plants and weeds little and often. If species prove too prolific, divide and share. Diverse yards incorporate multiple layers and support more wildlife.

Experiment and have FUN!
<table>
<thead>
<tr>
<th>Plant</th>
<th>Flowers:</th>
<th>Light:</th>
<th>Moisture:</th>
<th>Height:</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Columbine</td>
<td>Apr - May</td>
<td>Sun to Part Sun</td>
<td>Dry to Moist</td>
<td>2-3ft</td>
<td>Drooping bell shaped red and yellow bi-colored flowers 2-3ft tall float over delicate feathery foliage in April and May. Provides nectar for hummingbirds and early pollinators and is a larval host plant for many butterflies and moths as well. Mixes well with other early bloomers.</td>
</tr>
<tr>
<td>Dense Blazing Star</td>
<td>Jul - Aug</td>
<td>Sun to Part Sun</td>
<td>Dry to Wet</td>
<td>1-3ft</td>
<td>Spikes of tufty, fluffy, purple flowers on rigid stalks 2-4 ft. tall, bloom from July into August. Dense Blazing Star is a valuable nectar source for native bees and butterflies. Plant in masses or as vertical accents.</td>
</tr>
<tr>
<td>Purple Coneflower</td>
<td>Jul - Sept</td>
<td>Sun</td>
<td>Dry to Moist</td>
<td>2-4ft</td>
<td>Long-lasting, pinkish-lavender robust flowers bloom on 2-4 ft. stems, summer to early fall. A garden classic that is an excellent source of pollen and nectar for pollinators and provides seeds for Goldfinches.</td>
</tr>
<tr>
<td>Tall Anemone</td>
<td>May - June</td>
<td>Sun to Part-Shade</td>
<td>Dry to Moist</td>
<td>1-3ft</td>
<td>Delicate white, single flowers rise on long stalks above the 3 feet tall mounds of dark green foliage. Flowering in spring and early summer, this plant produces pollen for many native bees. The low growing leaves can also be used as ground cover. Provides winter interest with its thimble like seed heads.</td>
</tr>
<tr>
<td>Wild Quinine</td>
<td>May - Aug</td>
<td>Sun to Part-Sun</td>
<td>Dry to Moist</td>
<td>2-3ft</td>
<td>A long blooming and easy-going garden perennial, this unique plant is perfect for both formal or wild gardens. Reaching 2-3 ft, its small disc flowers resemble pearls from afar and flowers summer. Bees, wasps and flies flock to this great nectar source, while beetles feed on the pollen.</td>
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## Emerge, Bloom and Seed Timeline

<table>
<thead>
<tr>
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<th>Summer</th>
<th>Fall</th>
<th>Winter</th>
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<tbody>
<tr>
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<tr>
<td>Purple Coneflower</td>
<td></td>
<td></td>
<td></td>
<td>seeds persist in winter</td>
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<tr>
<td>Tall Anemone</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
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**Key:**
- **Emerge**
- **Bloom**
- **Seed**

## Garden Maintenance Timeframe

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<td>Dense Blazing Star</td>
<td>cut back last year's stalks to 8-15&quot;</td>
<td></td>
<td>leave stems for habitat</td>
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<td>Purple Coneflower</td>
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<td>deadhead early blooms</td>
<td>leave seed heads for birds leave stems for habitat</td>
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## Some native pollinators that frequent these plants

<table>
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<tr>
<th>Species Name</th>
<th>Pollinators, Larval Hosts, and Specialist Species</th>
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</table>
| Columbine             | Bees: small sweats  
*Larval Host Species:* columbine borer moth, columbine duskywing  
Butterflies: Aphrodite fritillary, clouded sulphur, gray hairstreak, great spangled fritillary, orange sulphur, monarch, painted lady, Peck's skipper, red admiral, tiger swallowtail, wood nymph  
Others: bee flies, soldier beetles, syrphid flies |
| Dense Blazing Star    | Bees: bumble, digger, leafcutters, long-horned, small carpenter, sweat  
Butterflies: great spangled fritillary, monarchs, red admiral, skippers, sulphurs, tiger swallowtail  
Others: banded long-horn beetles  
*Specialist Species*: mining Bees |
| Purple Coneflower     | Bees: leafcutters, small carpenters, small sweats, yellow-faced  
Others: fruitworm beetle, long-horned beetle, syrphid flies, tumbling flower beetle |
| Tall Anemone          | Bees: small resin, sweats, green sweats, mining, cuckoos, small carpenters, yellow-faced  
Butterflies: common wood nymph, great spangled fritillary  
Moths: grapeleaf skeletonizer  
Wasps: potters, masons, thread-waisted, paper  
Others: Formicidae ants, wedged-shaped beetles, banded long-horned beetles, ebony bug, soldier flies, syrphid flies, frits flies, spider crabs |
| Wild Quinine          |                                                                 |
Put your garden on the Map

Each new native planting adds to the Pollinator Pathway that renews and extends wildlife habitat across our neighborhoods and region, whether it is one container on the patio or a fully native backyard.

If you plant it, the pollinators and birds really will come!

Please take a minute to Register Your Pollinator Garden on the map to encourage the growing sustainable landscaping community.

To encourage your neighbors, we also recommend attractive explanatory garden signs.

You can purchase a Pollinator Pathway Garden sign through the GSWA plant sale.

If you have questions about your native plant garden

Feel free to email us at plantsale@greatswamp.org We want your pollinator garden to get a good start so it will provide you with years of enjoyment!