March 2022- Vol.8, No.3

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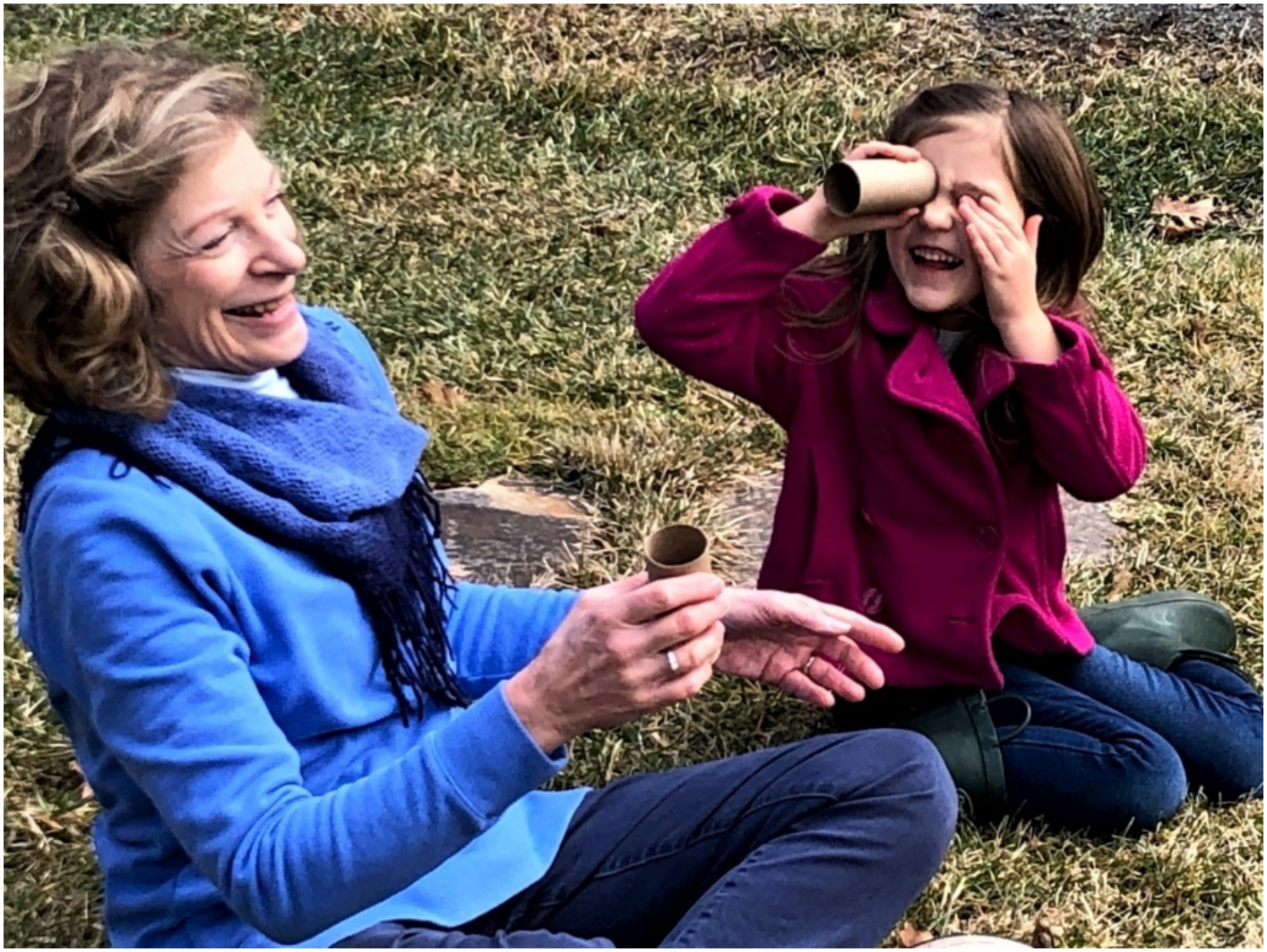
Sow Seeds for Gardening Joy

By mking | March 2022- Vol.8, No.3



Many of us who love gardening are grateful for parents, grandparents, teachers, and mentors who helped us appreciate the wonders of nature from an early age. With that in mind, the *Garden Shed* will publish ideas and activities on a quarterly basis to encourage children's awareness of plants and their surroundings. By "sowing these seeds," we may inspire children to embrace horticulture in their adult lives. This article offers tips to get started. Look for more suggestions in June, September, and December.

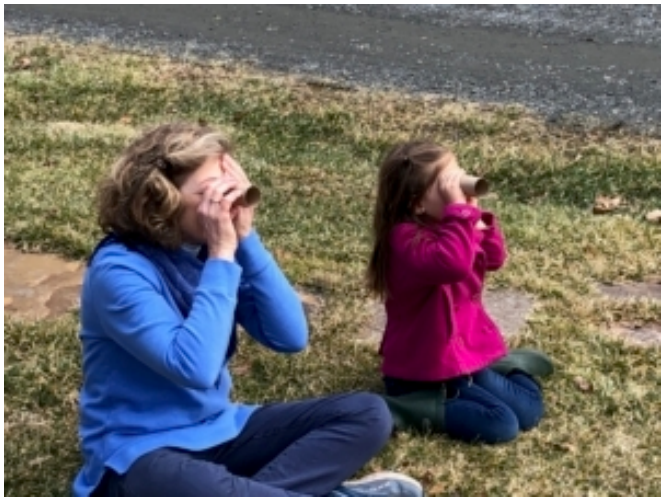
Feel free to adapt or embellish the activities when planning for your own use. These are not "prescriptions," so implement them appropriately with children in your care. If the realm of preschool or elementary education is new to you, keep these principles in mind:

- Immerse yourself in the experience with children to support focused attention.
- Set an example and share your own enthusiasm for nature; avoid trying to "preach or teach."
- Notice, listen carefully, and remain keenly aware of children's thoughts, feelings, and ways of communicating.
- Create sensory experiences. Have children use one or more of their senses to explore or investigate plants and plant relationships.

- Be true to science, including terms that expand children's vocabulary and knowledge.
- Make the interaction playful, memorable, and fun.

Activity: Take a Closer Look (ages 3-7 years)

In science, "observation" means all five senses (not just sight). In this activity, children use simple tools to *look closely* at plants and their environment.



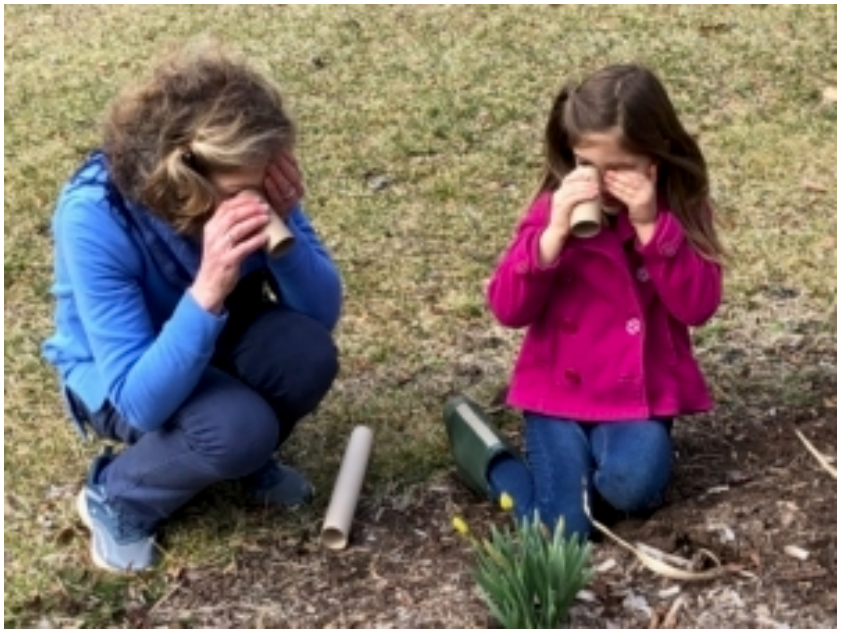
Sasha (5 years old) and Melissa observe through tubes. Photo: Richard King.

Materials: two empty cardboard tubes, one from toilet paper, one from paper towels

Process:

1. Go outdoors (if possible). Look around and ask children what they see.
2. Prompt observations with questions:
    - What colors do you see? What shapes do you see?
    - What big things do you see? What small things do you see?
    - What do you want to learn more about?
3. Help child hold one hand over one eye, so s/he is using only one eye to observe.
    - How is this view different?
    - Why did your view change?
4. Hold up empty toilet paper tube. Show child how to look through the tube with just one eye (keep other hand over opposite eye). Ask child to share how this changes the view.
    - What do you see now?
    - How is this view different from looking with both eyes without a tube?
5. Move closer to a tree or plant. Have child look with both eyes and describe what s/he sees. Encourage child to focus on that one plant. Ask questions to encourage child to be specific about what s/he notices.
6. Show child how to find a particular area on that plant (e.g., leaf); use toilet paper tube to look closely at that area. Ask, "What do you notice about this area?" If necessary, prompt child by sharing details that you notice (e.g., I see smooth edges on that leaf).
7. Repeat the observation process with paper towel tube (longer). Ask child to talk about what's different with this view. (e.g.,

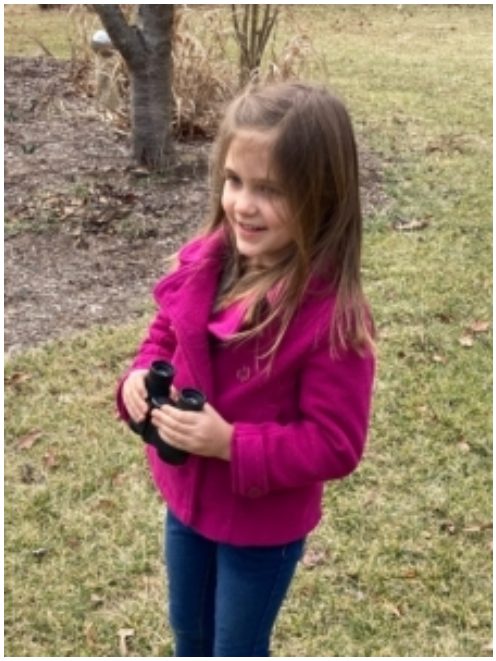
Restricted/smaller view is more focused.).



Melissa and Sasha view daffodils. Photo: Richard King

Sasha with long tube for focused observation. Photo: Melissa King

Keep these observation tools handy; children might surprise you by using them without prompting. They may also appreciate other tools for observation, such as binoculars. Show children how to be careful observers and how to communicate what they notice to stimulate their curiosity about the wonderful world of plants.



Sasha with binoculars for close-up views outdoors. Photo: Melissa King.

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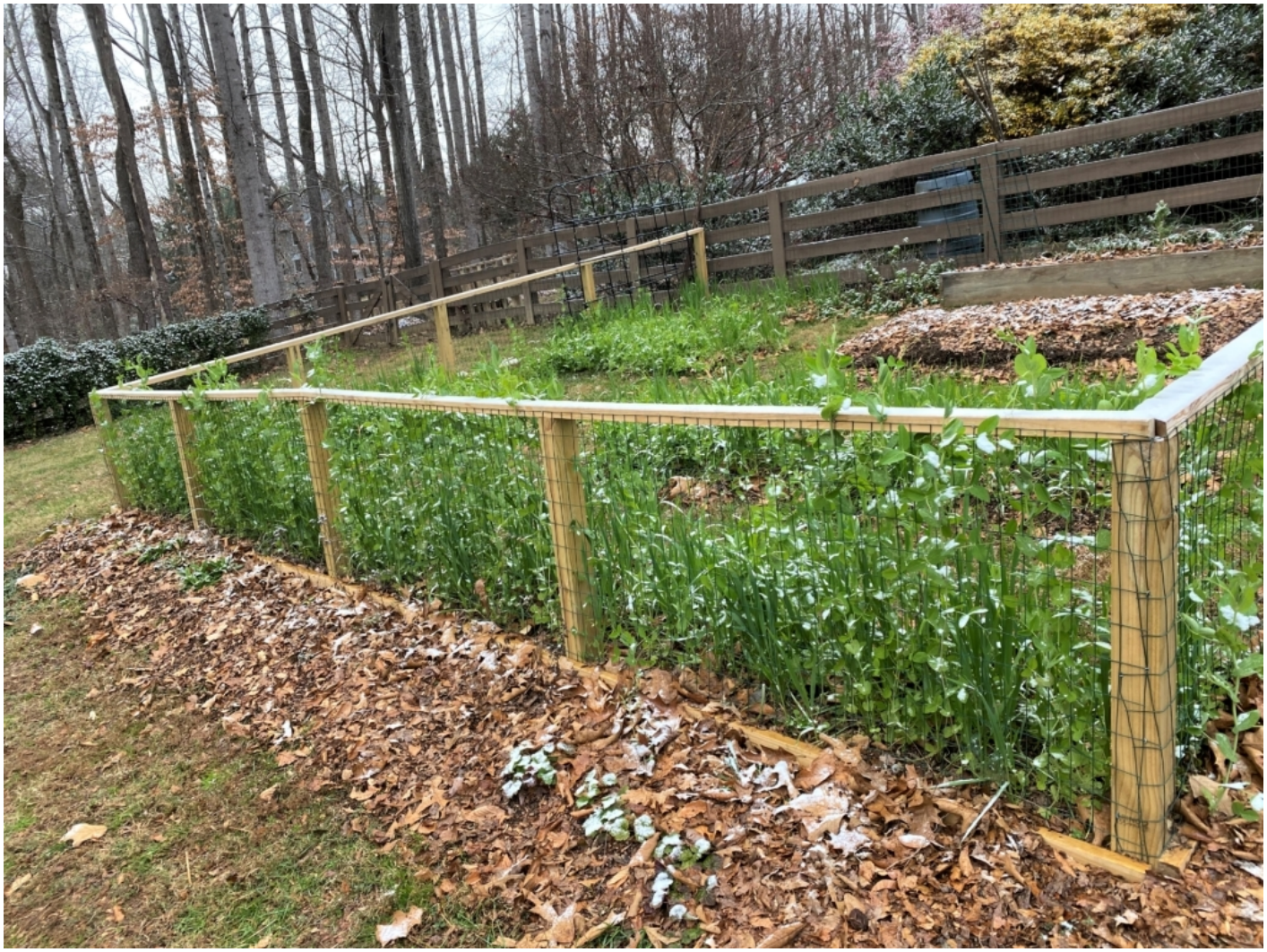
March In The Edible Garden

By Ralph Morini | March 2022- Vol.8, No.3

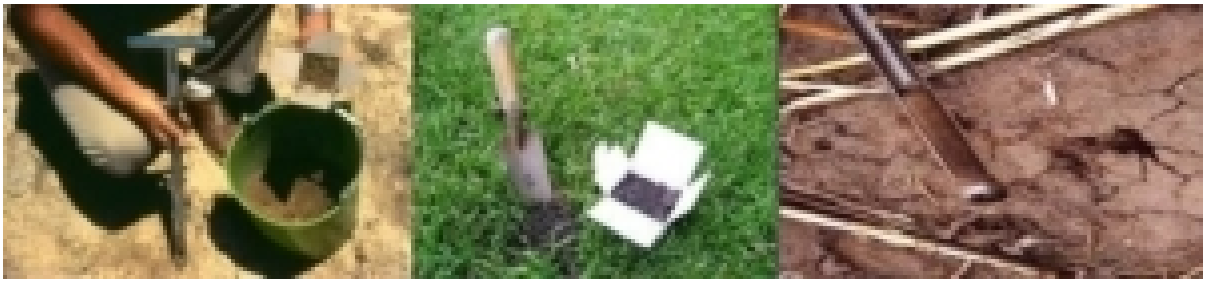


March brings the start of our outdoor gardening season. If you started cool weather crops indoors in February, you can begin transplanting into the outdoor garden in the middle of the month. Alternatively, garden centers will begin selling transplants of cabbage family crops and lettuces to be planted on the same schedule. Lots of plants can be direct seeded into the ground as well.

Fruit growers should aim to get pruning done early in the month before serious new growth starts. It is also time to fertilize and plant bramble fruits and blueberries.

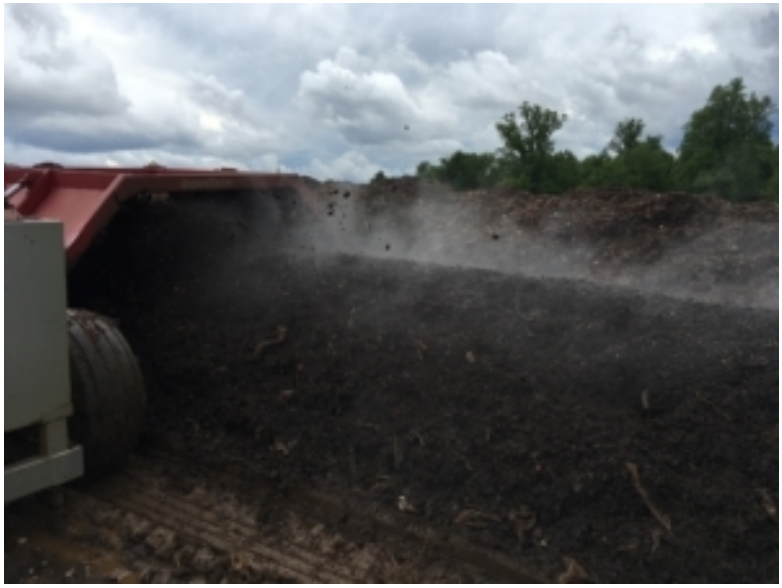
Let’s review some tips for getting things going.

Manage Your Soil for Best Growing Results



Soil testing: Photo: Virginia Tech Soil Testing Lab

If you haven't had a **soil test** for three years or more, consider a new test. They are a valuable tool for maintaining optimum soil fertility and pH levels. Soil sampling kits and instructions are available at your local Virginia Cooperative Extension office. In Charlottesville/Albemarle, test kits are available at the Albemarle County Office Building off 5th Street Extended. Kits are located at both the Stagecoach Road and Fifth Street entrances, in marked plastic bins. Be sure to take boxes and the appropriate instruction sheet for home gardeners versus commercial growers. Samples should be mailed with payment directly to the Virginia Tech lab and results will be issued directly to the sender. Call the Extension office at 434-872-4580 with questions. For additional information on soil testing, check out VCE publication 452-129: Soil Sampling for the Home Garden.



Hot composting at a local composter: Photo: R Morini

Regardless of your soil condition, adding organic matter to your soil will improve it, and fully-decomposed compost is a great way to do it. It improves soil structure and water infiltration, while absorbing and holding moisture longer, a real benefit during our hot, dry summers. Compost can be purchased but can also be made at home using yard and organic kitchen wastes. Instructions for home composting can be found in the VCE publication Backyard Composting. If you start a compost batch now, it should be ready for fall planting.

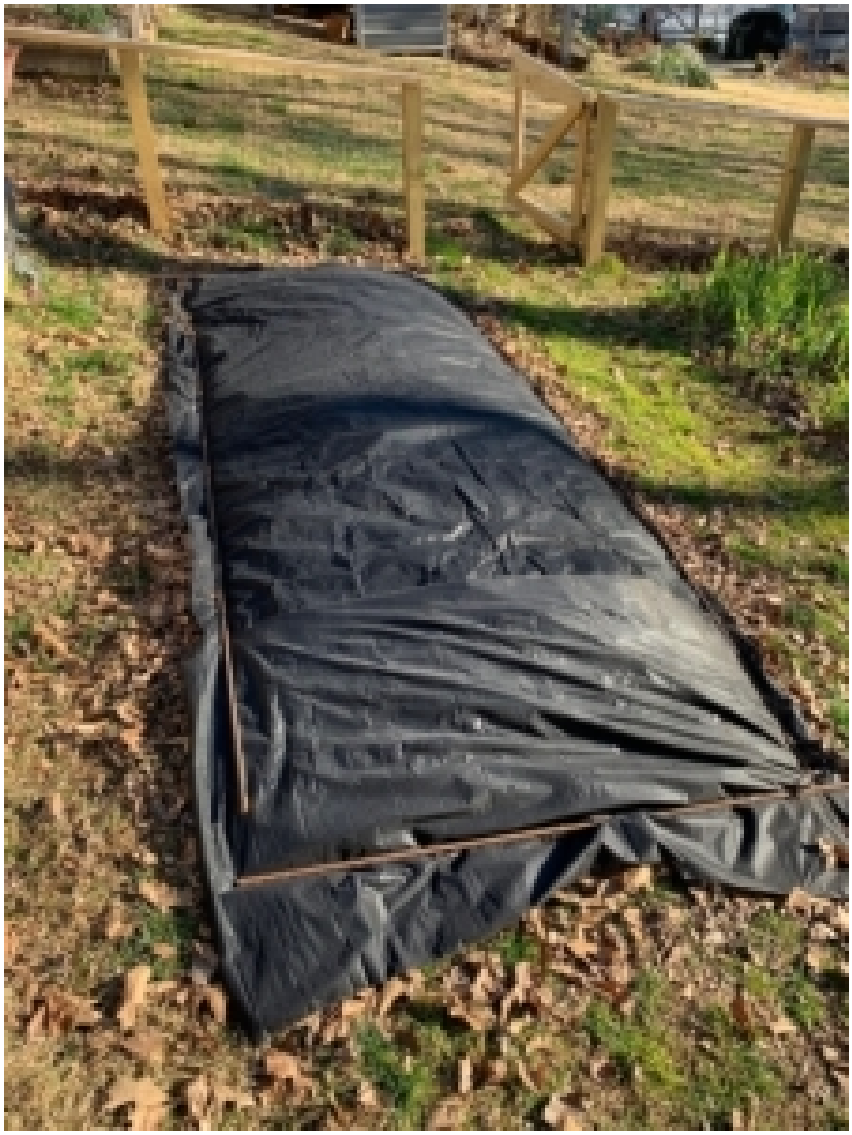
If you have a heavy clay soil in your garden and you aren't sure how to best manage it, take a look at the Garden Shed article Gardening in Clay. Surprise: the secret is adding decomposed organic matter!

When adding compost to beds, spread a couple of inches on the surface. For new beds to be planted this spring, it can be tilled in. For established beds, we recommend scratching it into the soil surface and letting

soil organisms carry it deeper.

Rather than tilling to loosen soil, insert a broadfork or digging fork as deeply into the bed as possible and rock it back and forth to aerate the soil without destroying the soil structure. Work your way across the beds, advancing several inches with each fork insertion.

Weed Management



Occultation for weed control. Photo: Ralph Morini

Best practices for preparing soil for planting now emphasize minimum tilling. Tilling breaks up soil structure and the aeration increases carbon dioxide emissions. Pulverizing soil aggregates leads to increased compaction over the course of the growing season. The biggest issue no-till raises is probably weed management. Hopefully, most home gardeners are not using glyphosate products to kill garden weeds. Old time mechanical methods of weed hoeing and pulling are great but a lot of work. An organic practice that works is called **occultation**. It involves covering beds for 4 weeks or longer with a black tarp or plastic sheet, secured around its edges. This denies light, smothering weeds and speeding decomposition of trimmed cover crop remains. Growers report season-long benefits in stifling weed growth. When the tarp is removed, residue can be raked up and used as mulch or composted. The post Black Covers Can Put Weeds to

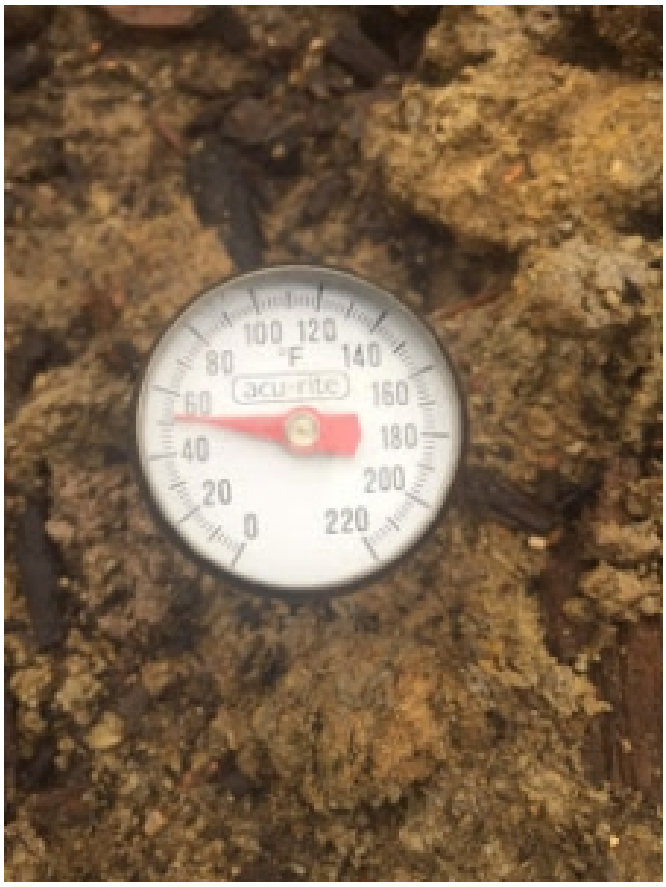
Bed . . . for Good from the Maryland Extension provides explanation and guidance.

Cover Crop Removal

If you have a cover crop growing, best time to remove it is after flowering, prior to going to seed. Use a string trimmer to cut it as close to the ground as possible. Leave the residue for a couple of weeks and then remove the residue and plant crowns with a stirrup hoe, leaving the roots in the soil. Use the residue as a mulch for transplants or rake them off for composting. Aerate the soil with a broadfork and smooth the bed with a rake for seeding.

It's Time to Plant

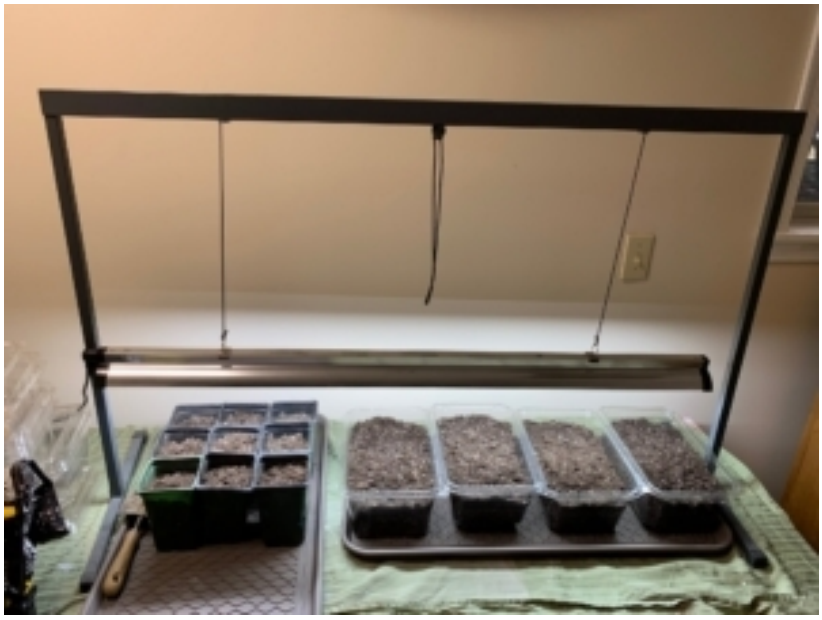
According to *Virginia's Home Garden Vegetable Planting Guide* from the VA Cooperative Extension, March is the time for outdoor seeding of cool weather vegetables, including beets, carrots, kale, collards, mustard greens, lettuces, peas, radishes, spinach, and turnips. Home-started or purchased transplants that can be planted in the garden this month include broccoli, cabbage, cauliflower, leeks, onion sets, and new asparagus plantings.



Soil thermometer: Photo: Colorado State Extension

Soil temperature is an important factor in successful outdoor seed germination. Soil thermometers are readily available at prices starting at about $15. Consider stem length if you purchase one. For soil, home gardeners only need a short stem; even 4 inches will suffice for seed germination. However, if you get one with a stem of 12 inches or more it can be useful to monitor compost temperature, where batches are typically 3 or 4 feet deep and the thermometer needs to probe deeper to get a good reading.

Cool weather crops like spinach and lettuce will germinate at temperatures in the 45-50° range, tomatoes need 60-65° soil, and squash and melons need about 70°. A complete guide is available in the Oregon State Extension publication Soil Temperature Conditions for Vegetable Seed Germination.



Simple seed starting setup. Photo: Ralph Morini

If you started seeds indoors in February and are moving them to the garden in March, remember to harden them off by putting them outside for progressively longer periods over one to two weeks once temperatures are above 50°F.

As you move early transplants outside, replace them with warm weather crops that should be transplanted after our last frost. For example, tomato seeds planted indoors in mid-March should be ready to transplant outside in about 6 weeks, around May 1. This matches up with our average last frost in Zone 7a of April 15-25. But remember that we had a frost in 2020 on May 9, so pay attention to current weather forecasts.

You can find lots of good advice for seed starting and transplanting in the VCE publication Plant Propagation from Seed and *The Garden Shed* article How to Start Your Garden Seeds.

Fruit Growing

If you are a fruit grower, fertilize fruit trees 3-4 weeks before active growth begins. Scatter fertilizer evenly under the tree, starting about 2 feet from the trunk and extending just beyond the drip line or end of the furthest branches. A soil test should be performed prior to applying fertilizer. For additional information on fruit trees, visit VCE Publication 426-841, "Tree Fruit in the Home Garden."

Fruit trees are pruned before growth starts in late winter or early spring to remove dead and diseased branches, remove vertical shoots, open the structure for light penetration, and to shape the tree. Further pruning can be done in summer to "dwarf" a tree, if desirable. Pruning allows the tree to direct nutrients to branches that will bear high quality fruit. The article Pruning Fruit Trees from the University of Nebraska Extension is a helpful resource. For more detail on the effects of pruning try VCE Publication 422-025, "Physiology of Pruning Fruit Trees."

Bramble fruits such as raspberries and blackberries may be planted in mid-to-late March. Plant in

moist, well-drained soil containing large amounts of humus or organic matter. For weed control, mulch around newly planted brambles with an organic mulch. For additional information on how to grow bramble fruit, review VCE Publication "Small Fruit in the Home Garden" or "Brambles: Pruning, Training and Growth Characteristics" from the University of Connecticut Extension.

Now is the time to plant **blueberry** bushes. Different varieties of blueberries have different requirements for "chilling hours" — i.e., the number of days with temperatures between 35° and 45°F. They also require very acidic soil for best growth. It makes sense to make careful choices when acquiring plants. *The Garden Shed* article Blueberry Cultivation in the Home Garden explains further.

If you have established blueberry plantings, the publication Pruning Blueberries from the Maryland Extension offers excellent pruning advice.

I hope this information provides guidance and motivation to help you get things going. It's great to be out in the garden again. See you next month.

Resources:

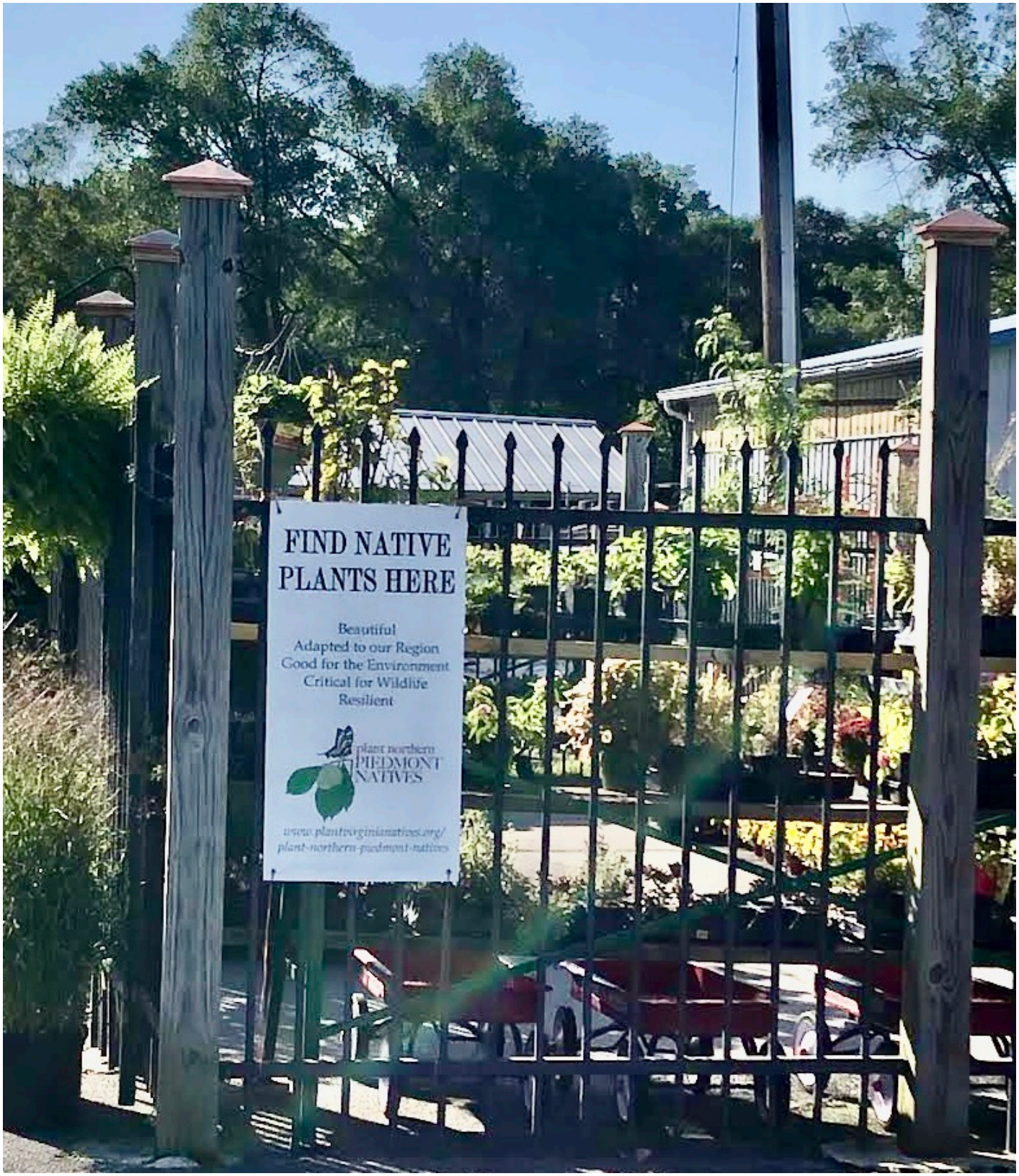
Virginia's Home Garden Vegetable Planting Guide and Recommended Planting Dates," Va. Coop. Ext. Publication 426-331, http://pubs.ext.vt.edu/426/426-331/426-331.html

"Tree Fruit in the Home Garden," VA Coop. Ext, Publication 426-841, https://www.pubs.ext.vt.edu/content/dam/pubs_ext_vt_edu/426/426-841/426-841_pdf.pdf

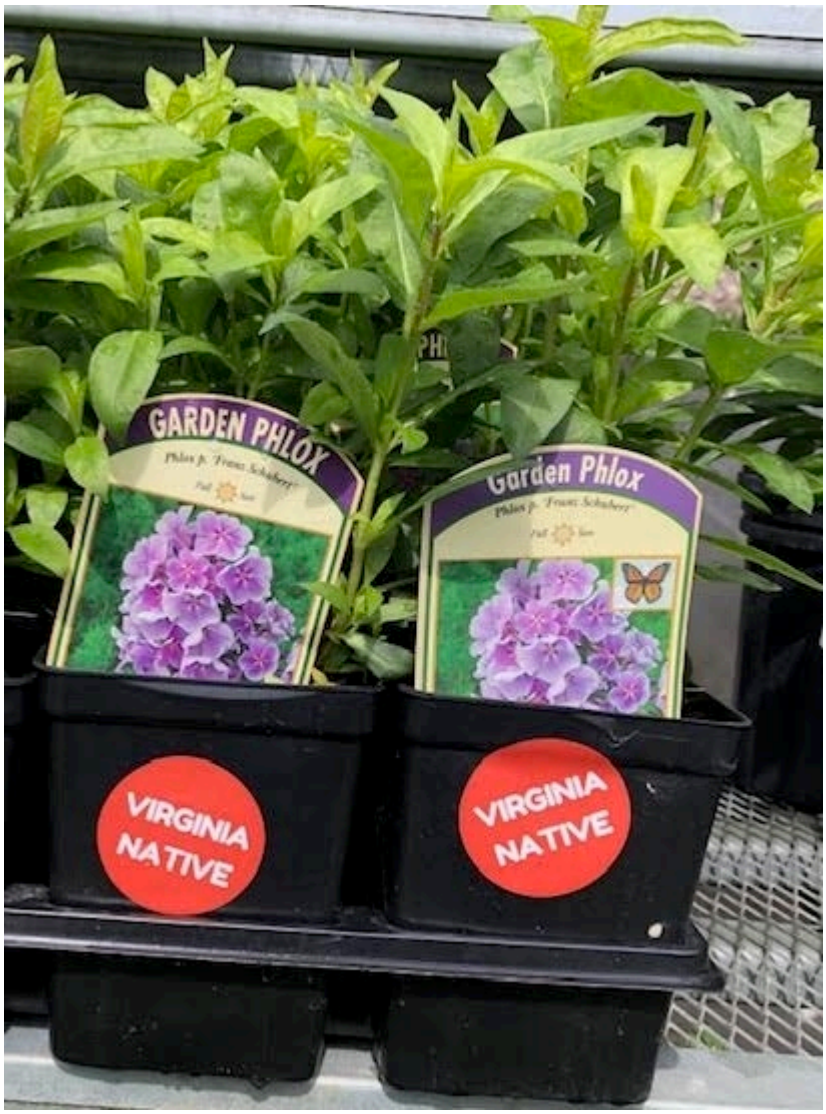
Soil Temperature for Vegetable Seed Germination, Oregon State Extension, Soil Temperature Conditions for Vegetable Seed Germination | OSU Extension Service (oregonstate.edu)

Coming to a Garden Center Near You

By Cathy Caldwell | March 2022- Vol.8, No.3



If you've ever wandered the aisles of a garden center wishing it were easier to find the natives you're eager to plant, you're in for a delightful surprise. On your next plant-shopping trip, you'll be greeted by bright red "Virginia Native" labels on every plant that is native to our ecoregion. Those bright labels are part of the Plant Northern Piedmont Natives Campaign ("PNPN"), which is in turn part of a statewide effort — the Plant Virginia Natives Campaign — to encourage more extensive use of native plants in both public and private landscapes. To learn more about the statewide campaign and to access lots of excellent resources, check out Plant Virginia Natives.



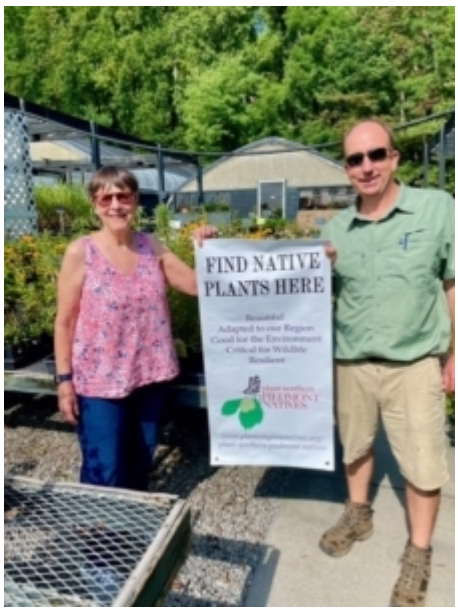
Look for these red stickers when you shop for plants. Photo: Cathy Caldwell

Volunteers with the Piedmont Master Gardeners have been working on the PNPN campaign along with their partners, the Virginia Native Plant Society, the Piedmont Environmental Council, and the Virginia Department of Wildlife Resources. A key first step was enlisting local garden centers and nurseries, an effort which was remarkably successful.

Plant Northern Piedmont Natives Retail Partners

- Blue Ridge Farmers Co-op (formerly Southern States) at Harris Street and Leake Square
- The Corner Store, Ruckersville
- Eltzroth & Thompson
- Farfields Farm
- Fifth Season
- Hummingbird Hill
- Ivy Corner
- Ivy Nursery
- La La's Garden
- ProTech Farm and Nursery
- Saunders Brothers Farm Market
- Snow's Garden Center
- Wintergreen Nature Foundation

Next, volunteers went to work on developing a list of plants that are locally native and suitable for local growing conditions. A starting point was the plants identified by the Digital Atlas of Virginia Flora as native to Charlottesville and Albemarle County, and to the counties of Buckingham, Culpeper, Fauquier, Fluvanna, Greene, Louisa, Madison, Nelson, Orange, and Rappahannock. To those were added **certain cultivars** of straight species — sometimes called "nativars" — but only after they had been vetted to ensure they are **ecologically viable**, meaning their leaves and flowers contribute to the food web and do not negatively alter insect behavior. In other words, caterpillars and pollinators will not turn up their noses at these cultivars.



Volunteers deliver signs to local garden centers. Photo courtesy of Bernice Thieblot.

The cultivar-vetting process was guided by recent research, which indicates that **a cultivar is ecologically viable so long as it exhibits characteristics similar to the species plant.** Thus, cultivars that have significantly changed flower color or morphology are not included, nor are cultivars that change green leaves to red, purple/brown, or blue. A number of the included cultivars were identified by formal scientific studies comparing their environmental services with those of straight species. To learn more about this research, see *The Garden Shed* article Native Species or Cultivars of Native Plants–Does it Matter?.

The PNPN list now contains over 300 plants. Volunteers with the campaign have been busy placing the red "Virginia Native" stickers at local garden centers as spring shipments arrive. In addition, they have developed and delivered educational materials to the participating garden centers.

Volunteers just recently completed three new brochures to guide gardeners in choosing the right native plant for their particular situation. You'll find them at participating garden centers and nurseries. With this information in hand, we gardeners will not only be able to find local natives, we'll be able to make informed decisions about which ones to purchase for our gardens.

SOURCES:

Plant Virginia Natives Campaign Website

March in the Ornamental Garden

By Patsy Chadwick | March 2022- Vol.8, No.3

March marks the beginning of spring, but it can be a fickle month! The weather can be mild and pleasant one day and then cold and blustery the next. Until the weather becomes consistently milder, be patient and use this time to organize your thoughts on what you want to accomplish in your ornamental garden this spring.

The soil in March is generally too cold and wet to work in. Just walking on soggy soil compresses the soil aggregates and particles. The resulting compaction affects drainage and rain infiltration and prevents plant roots from penetrating very deeply. Soil compaction also reduces the amount of open pore spaces, which makes it difficult for plant roots to absorb oxygen and water.

Here's how to tell whether your soil is dry enough to work in: Dig up a small amount of soil and squeeze it in your hand. If the soil stays in a solid muddy ball and does not fall apart, it's too wet to work in. If the soil crumbles through your fingers when you squeeze it, then it's ready to be worked.

Once the soil in ornamental garden beds is dry enough to walk on, remove any weeds that have overwintered in your flower beds. It's important to tackle weeds early and stay on top of this task

throughout the growing season. For help with identifying weeds, check out Virginia Tech's Weed ID website or the University of Missouri Weed ID Guide.

Don't be too eager to cut back last year's perennial foliage and stems. If possible, hold off on this task until daytime temperatures are consistently above 50°F for at least seven consecutive days. Many beneficial insect species such as small native bees, syrphid flies, and lacewings overwinter in the debris and are merely waiting for warmer weather conditions before emerging. By waiting for the right conditions, you give these insects the chance to emerge safely.

Redefine flower bed edges as needed to give them a neat, crisp appearance. A flat-edged spade is very useful for this task.

Direct sow seeds for hardy annuals such as larkspur, sweet peas, and love-in-a-mist. These annual species germinate best when soil temperatures are between 55°F and 65°F, which means they can be planted weeks before the last frost date in spring. On the other hand, **tender annuals** such as begonia, cosmos, zinnia, and vinca can't handle cooler soil and air temperatures and should be planted after the last frost date in spring. As a reminder, the last frost date for the Charlottesville/Albemarle County area of Virginia is around April 15 to April 25 on average. To learn more about hardy annuals, see the University of Missouri Extension's publication on Flowering Annuals.

Assess your emerging perennials to identify any that need to be divided. Guidelines vary on how often to divide perennials but, on average, many of them benefit from being divided about every three to five years. As a general rule, divide spring and early summer-flowering plants in the late summer or fall and fall-blooming plants in the spring**.** And here's another tip: Hostas may be divided just as they emerge in early spring to minimize damage to the leaves. For more insight into how and when to divide perennials, see *Garden Shed* article on Guidelines for Dividing Perennials.

Now is a good time to have the soil tested in your ornamental garden beds to determine the pH and to analyze fertility levels. If it's been a while since you've had your garden soil tested or if you've never had a soil test done before, check out the Virginia Cooperative Extension's (VCE) website, which is http://www.ext.vt.edu and view Publication No. 452-129, Soil Sampling for the Home Gardener. Don't guess! Follow the soil test recommendations for incorporating any amendments into the soil.

Top dress flower beds with one inch of compost to improve the soil structure, add nutrients, and enhance the soil's capacity for holding moisture.

Now is a good time to plant **bare root, dormant roses.** Soak the bare root rose in a bucket of water for at least eight or more hours to rehydrate the roots. Choose a sunny, well-drained location, dig the planting hole wide enough and deep enough to easily accommodate the roots and set the plant so that the graft union is at soil level. Space roses far enough apart to allow good air circulation.

Prune established rose bushes now to improve their health and structure. Make sure your pruners are sharp and clean. Prune canes to an outward-pointing bud and make each cut at a 45° angle just slightly above the bud. Remove any weak or unattractive canes. Cut any damaged wood back about one inch into healthy wood. Cut any dead canes down to the ground level. If any branches rub together, choose the healthier of the two and remove the other one. If you are pruning a grafted rose, check for suckers below the graft union and remove them. Proper pruning facilitates better air circulation, also allows more sun into the middle of the plant, and results in a healthier, more attractive plant.

Prune subshrubs to shape them or remove dead terminal growth. By definition, a subshrub is a dwarf or low growing shrub or perennial plant that has woody stems at the base but new soft, green terminal

growth that typically dies back each year. Some examples of subshrubs include the following:

- Blue Mist Shrub (*Caryopteris*) – Cut back top growth by about a third to neaten the shrub and encourage new growth. To rejuvenate the shrub, cut it back to about 6 inches from the ground.
- Heather (*Calluna vulgaris*) – Prune flower stems back to the base of old flowers. Snip the green part only. Don't cut down to the brown woody portion.
- Lavender (*Lavendula*) – Although Lavender is a subshrub, **it should not be cut back until after it blooms**, at which time, remove only the green part. Do not cut into the brown woody part.
- Lavender cotton (*Santolina chamaecyparissus*) – Cut back to within 6 inches of the crown every 2 to 3 years to keep it vigorous.
- Russian Sage (*Perovskia atriplicifolia*) – Leave the foliage standing over winter to provide interest and help protect the crown. Cut the old foliage back in spring to within 6 inches of the crown.

If deer are a nuisance in your garden, apply repellents or other deterrents as soon as the plant foliage emerges from the soil. The idea is to condition the deer to view your emerging plantings as unpalatable. Generally, no one deterrent, short of a physical barrier, is enough to stop a hungry deer. For lots of good information on how to address the problem of deer in the landscape, see *The Garden Shed's* article Deer, Deer, Deer!, which appeared in the May, 2021 issue. In addition, see VCE Publication HORT-62NP, Deer: A Garden Pest, and VCE Publication 456-018, Pest Management Guide: Home Grounds and Animals (scroll down to "Other Animals" in the menu) for more good information on how to deal with deer problems.

If you plan to **grow annuals or perennials from seed**, check seed packets for guidance on the merits of direct sowing in the garden versus starting seeds indoors. Tip: If you decide to start your seeds indoors, sow them in a fine, soil-less growing medium. Place under cool-white fluorescent lights about 14 to 16 hours per day and position the lights about two inches from the top of the seedlings. Maintain day-time temperatures at 70° to 75° F. and 65° F. at night. Keep the growing medium moist but not wet.

Clean leaves and other debris out of aquatic gardens to help reduce algae growth when temperatures warm up. Tip: If amphibians live in your pond, be careful not to disturb them. If they have already laid their eggs, be very gentle as you work around the eggs to avoid harming them.

Sources vary on **when to fertilize spring-flowering bulbs**, but, as a general rule of thumb, they may be fertilized with a **low-nitrogen fertilizer** or a fertilizer made especially for bulbs as soon as the shoots start to appear in spring. For daffodils, the American Daffodil Society recommends reapplying fertilizer at bloom time as well. Other sources recommend fertilizing daffodils after the bulbs have finished blooming. Regardless of when you fertilize, if you are using a granular fertilizer, avoid getting any on the foliage and be sure to water it in or apply it just before a rain.

Cut back ornamental grasses early in the month before they start to display new spring growth. If you wait too long, you risk cutting the new foliage.

Prune tree and shrub twigs that were affected by winter kill. Cut back to green wood. To determine if the twig is alive or dead, scratch the bark with your fingernail.

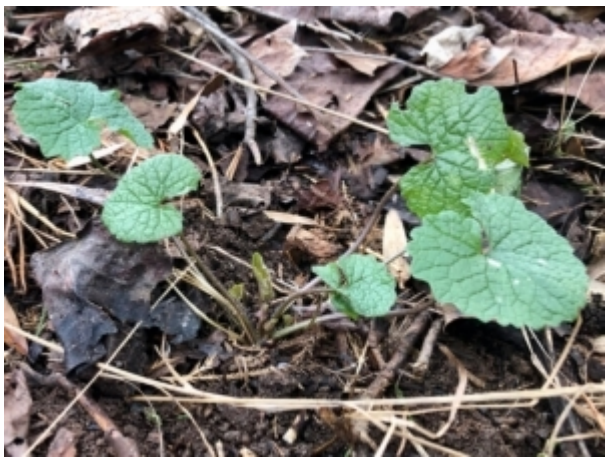
Feed houseplants with a diluted (half-strength) solution of soluble houseplant food this month. This is when houseplants start actively growing.

Once the soil is dry enough, **inspect your lawn for any problems that need to be addressed**. For example, does the soil need to be aerated and de-thatched? Are there drainage issues that need to be

addressed to eliminate standing water? Does the lawn have bare spots that need to be seeded?

If you haven't had a soil test done for your lawn recently, have one done to find out what nutrients, if any, may be needed. See VCE Publication 452-129, Soil Sampling for the Home Gardener. Note: if the lawn needs fertilizer, it's generally best to apply it in the fall rather than in the spring. For more information on lawn fertilization, see VCE Publication 430-011, Lawn Fertilization in Virginia.

Invasive watch: Look for garlic mustard (*Alliaria petiolata*) in your landscape and eliminate it in spring when the ground is moist and the plant is easy to pull up. This **invasive plant** has displaced native wildflowers such as spring beauty, wild ginger, bloodroot, trillium, and toothworts in many forested areas. Although it is easiest to recognize after it produces white flowers in early April, its foliage is also distinctive, and all parts of the plant emit a strong garlic odor. It is essential to remove garlic mustard before it sets seed. For more information on identification and treatment, see the Blue Ridge PRISM (Partnership for Regional Invasive Species Management) Factsheet/Garlic Mustard.

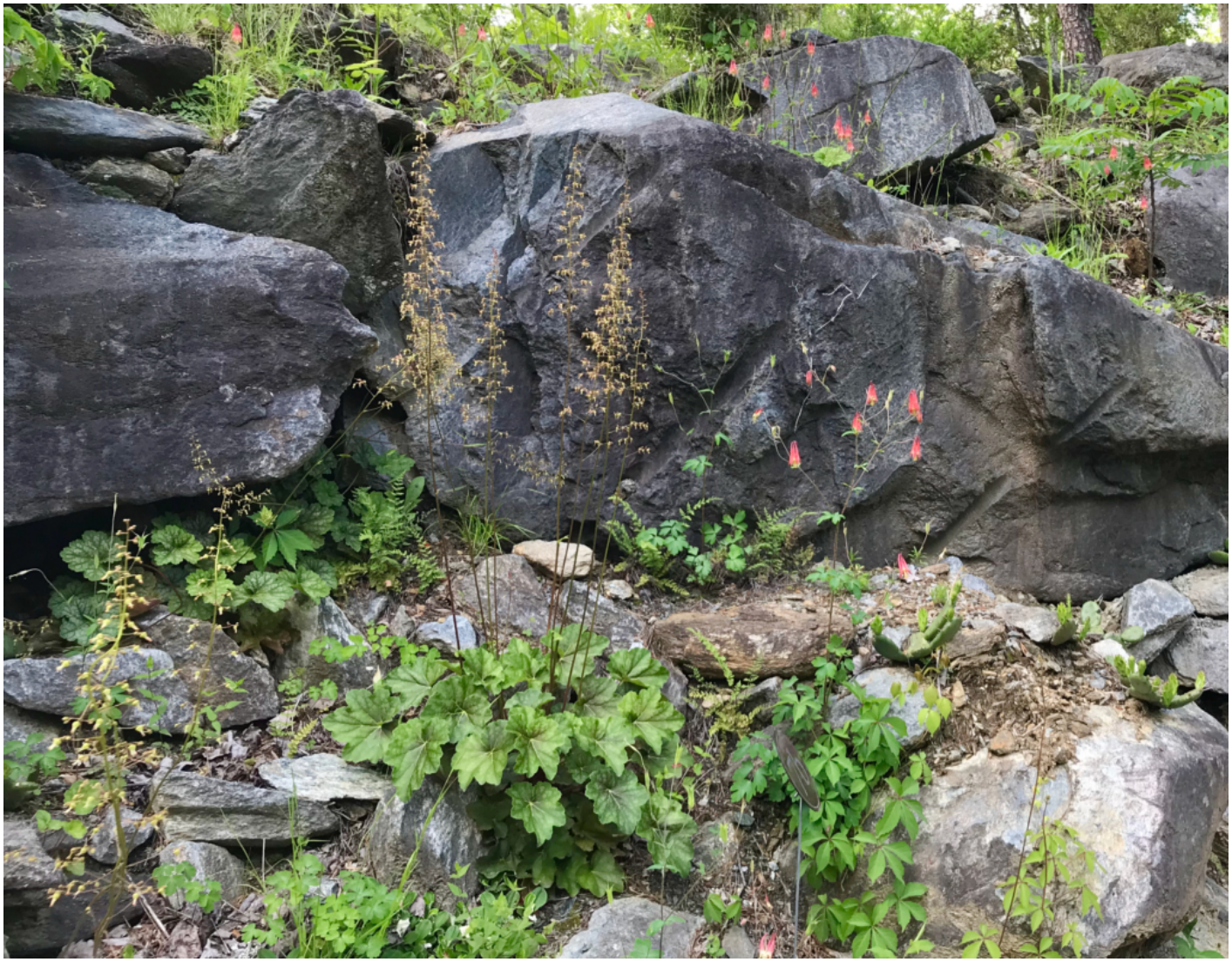


Garlic mustard
Photo: Cathy Caldwell

Take photos of your daffodils, hyacinths and other spring bulbs as they emerge in spring to help you remember where they are planted. Once the foliage dies back in late spring, it's all too easy to forget where the bulbs are located. Your photos will save you much frustration and heartbreak later when you are digging holes for new plants.

Heuchera – Known As Coral Bells, Alumroot, and More

By Susan Martin | March 2022- Vol.8, No.3



Heuchera, commonly called coral bells or alumroot, is a genus consisting of about 55 species (exact numbers vary) of evergreen to semi-evergreen herbaceous perennials, **all native to North America**. In fact, coral bells were one of the first plants exported back to Europe in the 1600s by early American explorers. **Different species exhibit attributes that are specialized to their native areas.** For example, some species are not bothered by heat and humidity; others perform well at high elevations; others can tolerate more sun. Yet, cultivars sometimes combine species from different regions, which can make hardiness a concern.

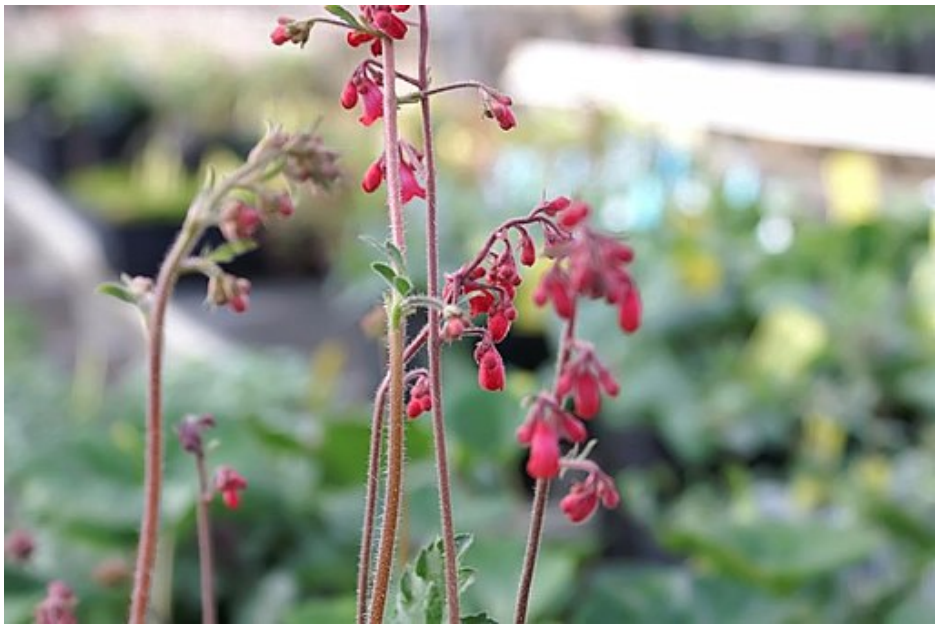
Heuchera is dominated in the trade by a profusion of cultivars. Hundreds of cultivars have been introduced since the 1990s, the majority with an emphasis on ornamental foliage. In fact, the straight species are difficult to find outside of nurseries that specialize in native plants.

Most *Heuchera* cultivars are based primarily on 4 main species for parentage, **two of which are native to**

Virginia. This article will:

- Discuss the characteristics and care issues common to different species of *Heuchera*
- Describe species native to Virginia
- Introduce two other species primarily used in cultivar development
- Demonstrate how the characteristics of different species are exhibited in cultivars
- Highlight several field trials that evaluated cultivar hardiness and vigor

GENERAL CHARACTERISTICS



H. sanguinea 'Splendens' flowers Photo: David J. Stang, Wikimedia Commons (CC BY-SA 4.0)

A member of the saxifrage family (*Saxifragaceae*), some of *Heuchera*'s cousins include the genera *Ribes* (gooseberry and current), *Astilbe* (false spirea), and *Tiarella* (foamflower). (For more information on the native plant *Tiarella*, see this article from *The Garden Shed*.) While some species are known for floral display, most are known for their **ornamental foliage.** In addition to a beautiful range of colors, leaf shape, size, and textures, many Heuchera display a color change through the season from the bright colors of spring to the mature, darker leaves of midsummer. **Individual tiny flowers are bell-shaped and appear in spring to summer in panicle inflorescences,** which means a cluster or grouping of flowers along the stem. Flower color and the amount of flowering differ by species. A high tannin content gives the foliage a bitter taste that makes it **unappetizing to deer**. Rabbits sometimes feed on floral stems. Plants tolerate juglone and can grow well in the dripline of the black walnut (*Juglans nigra*). The roots of some species contain the mineral substance alum, a powerful astringent that was used medicinally to treat wounds, sores, nose bleeds, and gastrointestinal ailments.

GENERAL CARE

Most species are happiest growing in **moist, well-drained organic soils in partial shade or morning sun**. *Heuchera* grows in USDA Hardiness Zones 4-9 and is usually "evergreen" in Zones 7-9. "Evergreen" is a term that may promise more than what is delivered; *Heuchera* often lays flat in winter winds and sometimes heaves out of the ground from wind and desiccation. Some species will grow in full sun, especially in the northern half of the country, if the soil is kept consistently moist. In zones 7-9, *Heuchera* does best

when protected from hot afternoon sun; leaf scorch can be a problem. **In general, plants with darker colored foliage can withstand more sunlight. Good drainage is essential to good health; crown rot may be a problem** if soils do not drain adequately.

ROOT CARE AND DIVISION

Coral bells are shallow-rooted, and their woody crowns are held above the soil as the plants age. A thick woody stem with noticeable rings grows up from the crown and gets longer each year. As it grows, it can become more fragile and more vulnerable to desiccation. **Coral bells tend to be short-lived and may need to be rejuvenated every 3 to 4 years.** You can dig up the plants and replant them a little deeper, with 1-2" of the stem sticking out of the soil. You can also lift the entire clump, cut away the older root stalks, and replant the youngest growth.

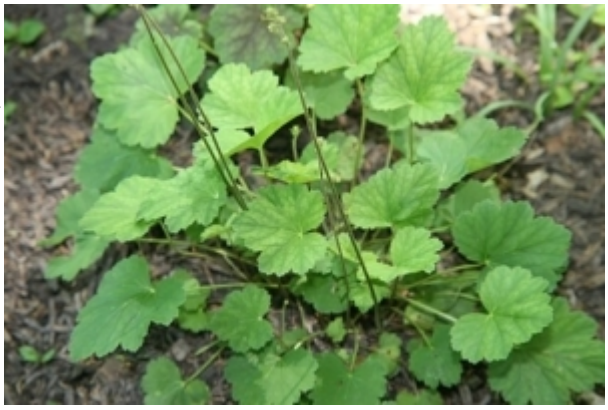
HISTORY OF *HEUCHERA* CULTIVAR DEVELOPMENT

Heuchera 'Montrose Ruby' Photo: Courtesy of Missouri Botanical Garden Plant Finder

In the 1980s, North Carolina nursery owner Nancy Goodwin found a **naturally hybridized** *Heuchera* seedling that had dark leaves with silver markings. It was found in her garden between two cultivars, ***H. americana* 'Dale's Strain' and *H. micrantha* 'Palace Purple'.** This naturally hybridized cultivar, **'Montrose Ruby'**, showed plant growers that they could **develop exciting new foliage colors** by crossbreeding two or more different *Heuchera* species.

BACKGROUND ON CULTIVAR DEFINITIONS

I contacted Ian Caton, a native plant nurseryman in Floyd, VA, with questions about *Heuchera* cultivars. **To meet the definition of cultivar, which means cultivated variety, a plant must be bred asexually.** Ian explained that *H. micrantha* var. *diversifolia* **'Palace Purple' is propagated asexually,** which involves taking a part of one parent plant and causing it to regenerate itself into a new plant. ***H. americana* 'Dale's Strain', *H. villosa* 'Autumn Bride',** and ***H. villosa* 'Bronze Wave'** are examples of *Heuchera* that have **origins as purely wild plants** with characteristics that pass along fairly well, generation after generation from seed. 'Dale's Strain' is almost always propagated by seed. Although 'Autumn Bride' comes true from seed, and is sometimes still propagated that way, it is also propagated asexually which is more volume efficient. 'Bronze Wave' shows phenotypic variation, which, on a practical level, means its seedlings can show a variety of foliage colors. Therefore, this plant is propagated asexually to achieve more uniformity for sale in nurseries. These examples show the complexity of the cultivar label! **In general, species or seed-grown strains of a particular species are going to be very hardy**.



H. americana 'Dale's Strain' Photo: David Stang, Wikimedia Commons (CC BY-SA 4.0)

Heuchera villosa 'Autumn Bride' Photo: Courtesy of Missouri Botanical Garden Plant Finder

PLANT VIRGINIA NATIVES CAMPAIGN

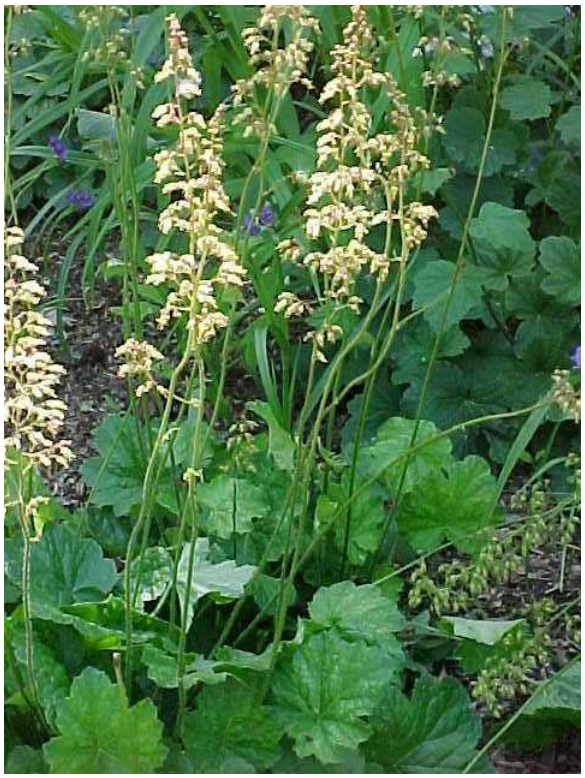
This campaign is an effort to help Virginia gardeners identify plants native to their area. Watch for an article about the Campaign in next month's *Garden Shed*. For inclusion on the list of recommended plants, cultivars of straight species have been vetted to ensure they are **ecologically viable**, meaning their leaves and flowers contribute to the food web and do not negatively alter insect behavior. **Two heuchera cultivars are included on this list: 'Dale's Strain' and 'Autumn Bride'.** As described in the section above, 'Dale's Strain' and 'Autumn Bride' are seed strains, although they may be labeled at nurseries as cultivars.

SPECIES USED IN CULTIVAR DEVELOPMENT

Although there are now hundreds of *Heuchera* cultivars, **four native species (out of over 50 species) are the primary contributors to cultivar development: *H. americana, micrantha, sanguinea* and *villosa*.** Let's now look at these four species in more detail, with particular emphasis on the two main species native to the southeastern U.S., and two other native species found in this area.

HEUCHERA SPECIES NATIVE TO SOUTHEASTERN U.S., INCLUDING VIRGINIA

H. americana



H. americana Photo: Courtesy of Missouri Botanical Garden Plant Finder

Commonly called alumroot, coral bells, and rock geranium, this species is **native to the southeastern U.S., including Virginia,** but is **hardy** in many parts of the country. According to the Digital Atlas of the Virginia Flora, it is frequently to commonly found in the mountains and in the Piedmont; it is infrequent in the inner Coastal Plain and rare to absent in the outer Coastal Plain. According to the Native Plant Finder by Zip Code, it is native to Albemarle County. In nature, it can be found growing in shade to partial shade in rocky forests and rock outcrops, particularly where soils are acidic. **It has a clumping habit** and grows 1-3' tall and 1-1.5' wide. **Heart-shaped leaves emerge flushed with purplish-brown and mature to a uniform green.** Tiny flowers are greenish or creamy with a pinkish tint. This species has been used as a component of modern hybrids to lend **hardiness, vigor, and color.**

H. villosa

H. villosa. Photo: peganum, Wikimedia Commons (CC BY-SA 2.0)

Commonly called **hairy root alum or maple-leaved alum,** this species is native to rocky wooded slopes in the **Eastern United States from New York to northern Georgia.** According to the Digital Atlas of Virginia Flora, *H. villosa* is common in the mountains of southwest Virginia, becoming less common northward to Rockingham County and infrequent to rare in the inner southern Piedmont. According to the Native Plant Finder by Zip Code, it is native to Albemarle county. It grows best in part shade or filtered sun in moist, well-drained, humus-rich soil. *H. villosa* is **heat and humidity tolerant**, a desirable characteristic for cultivar selection. It is **one of the largest alumroots**, growing 1.5-2.5' tall and 1-2' wide. It has hairy leaves that are often compared to maple leaves. **Its form is more open** than mounding. Breeding has

led to various different shapes and sizes of *Heuchera*. Tiny, whitish to pinkish flowers appear in mid- to late summer, which makes this one of the **latest-blooming** *Heuchera.*

OTHER SPECIES NATIVE TO SOUTHEASTERN U.S.

H. longiflora

Commonly called **long-flowered alumroot,** this species is native from southern Ohio to Alabama, but is **rarely found in the wild. In Virginia, it is limited to the mountains of the far southwest, where it is frequent.** It is very similar in size and color to the more well-known *H. americana.* The main difference is that the individual flowers of *H. longiflora* are larger and held on stems that are shorter than *H. americana*. It blooms May-June. Foliage is green with dark green veining, sometimes with a silverish overlay.

H. pubescens

H. pubescens Photo: Kurt Stuber, Wikimedia Commons (CC BY_SA 3.0)

Commonly called **downy alumroot**, this species is **native to Virginia at elevations of 3,000-4,000′.** It is frequent in the mountains, rare in the inner Piedmont. It grows 8-14” tall and has short flower clusters of showy white individual florets; blooms July-August. The foliage has an attractive purple-red color in winter.

OTHER SPECIES USED IN CULTIVAR DEVELOPMENT

H. micrantha

H. micrantha Photo: brewbooks (CC BY-SA 2.0)

Commonly called **crevice alumroot,** this species is **native to western North America** from British Columbia to California, where it grows on rocky slopes and cliffs. Its foliage varies from green to reddish green or purplish green. Although this species is frequently used for color in the development of hybrid cultivars, it **tends not to perform well in warmer climates.** ***H. micanthra*** **'Palace Purple' ignited great interest when it won 1991 PPA Perennial of the Year, and inspired a wave of *Heuchera* cultivar development.**

Heuchera micrantha 'Palace Purple' Photo: Opiola Jerzy (Poland), Wikimedia Commons (CC BY-2.5)

H. sanguinea

H. sangjuinea Photo: Patrick Alexander, Creative Commons (CC-zero)

Commonly called **coral bells** in reference to this old-fashioned species' **showy, sweetly fragrant, deep pink to red bell-shaped flowers** which appear in late spring and can last through early summer (May-July). The flowers are a nectar source for bees and hummingbirds. ***H. sanguinea*** **is known for its floral displays** more than for its foliage, although it has interesting green, heart-shaped or roundish leaves. It grows 9"-2.5′

tall and 1-1.5′ wide. **Native to the southwestern U.S**., it grows in full sun to partial shade in well-drained soil with high organic content. Field trials by the Chicago Botanic Garden found a **tendency for stem rot among cultivars with this species in their parentage.**

FIELD TRIALS

Chicago Botanic Garden

Richard G. Hawke of the Chicago Botanic Gardens headed a comprehensive evaluation of 64 *Heuchera* species and cultivars from the spring of 1995 through the autumn of 2000. The study evaluated **hardiness and vigor factors, as well as ornamental traits.** The results of this study and cultivar recommendations can be found at this link.

University of Vermont

In 2008, Dr. Leonard Perry at the University of Vermont started a field study of 112 *Heuchera* cultivars, including a few Heucherella cultivars, in response to growers' concerns about **cold hardiness.** See this link for more details.

Mt. Cuba Center

Headed by George Coombs, now Head of Horticulture at the Mt. Cuba Center, these trials evaluated 83 different *Heuchera* cultivars over a 3-year period from 2012-2014. The focus was on identifying the **best cultivars for mid-Atlantic gardens,** and to that end, **cultivars were selected whose parentage came from the two primary species native to the southeastern U.S., *H. americana* and *H. villosa*.**

Top field trial performers were*: 'Citronelle', 'Cajun Fire', H. villosa 'Bronze Wave', 'Color Dream', and Steel City'*. See this link for more details on this study and its results.

HOW TO USE

Large alumroots have a dramatic effect when planted en masse in the garden and are effective companions for plants with very showy blooms. The mounding species like *americana* can be used as accent plants, while the species with more open habits — like *villosa* — can be easily interwoven with other plants. *Heuchera* also **performs very well in containers** where moisture and exposure to sunlight can be controlled.

POLLINATOR BENEFITS

While the flowers of most species of Heuchera are secondary to the foliage, the nectar and pollen of the flowers attract small bees, including Halictid bees and the **native *Heuchera* specialist bee** *Colletes aestivalis* (only interested in native *Heuchera*). Species with red flowers are a nectar source for hummingbirds. *Heuchera* species are also visited by flies and wasps. *H. Americana* and *H. villosa* are hosts for 1 moth caterpillar in Albemarle county, *Epinota heucherana* Heinrich, 1923.

PESTS AND DISEASES

Root rot can be the most challenging problem. Black vine weevil is a notorious garden pest for a lot of genera, including *Heuchera*. Vine weevils make a characteristic D-shaped hole in the leaf which indicates that there are adults feeding on the leaves. Larvae are more destructive, feeding on roots deep in the soil in the winter. See this link for more information.

SUMMARY

All species of *Heuchera* are native to North America with different species exhibiting attributes that are specialized to their native areas. Although it is difficult to find straight species in the trade, native nurseries are a good source. **See this list of Native Plant Nurseries compiled by the Virginia Native Plant Society.** *H. americana* and *H. vilossa* are the two main species local to the southeastern U.S., including Virginia. Hundreds of cultivars are available, mainly with enhanced foliage color and form. Flower colors and the amount of flowering vary by species, with *H. sanquinea*, a southwestern native, best known for its floral displays. The combination of parent species will affect the hardiness and adaptability of cultivars to different regions. Most species are happiest growing in moist, **well-drained** organic soils in partial shade or morning sun. Although a perennial, *Heuchera* and its cultivars can be effectively used in container plantings, allowing control over moisture and sun exposure.

SOURCES

Digital Atlas of the Virginia Flora

Native Plant Finder According to Zip Code

Ian Caton, Wood Thrush Native Nursery

"Landscape Plants Rated by Deer Resistance," Rutgers University.

"Heuchera," Field Trials, Mt. Cuba Center

"The Results Are In: Heuchera is a Great Alternative for Shade Gardens," Mt. Cuba Center

"Evaluating Native Plants at Mt. Cuba Center with George Coombs," a 2014 Interview by Margaret Roach, A Way to Garden.com

"The Best Heuchera and How to Grow Them, with Mt. Cuba Center," a 2015 interview with George Coombs by Margaret Roach.

"An Evaluation Study of Coral Bells," Plant Evaluation Notes (2003), Richard G. Hawke, Chicago Botanic Garden

"Vermont Heuchera (Coralbells) Trials 2013," Dr. Leonard Perry, University of Vermont

Heuchera americana, NC State Extension

Heuchera villosa, NC State Extension

Heuchera sanquinea, NC State Extension

Lady Bird Johnson Wildlfower Center Native Plant Database

Heuchera micrantha, CALSCAPE, California Native Plant Society of Sonoma County

Heuchera pubescens, Lady Bird Johnson Wildlife Center Native Plant Database

Heuchera americana hirsuticaulis, Woodland Alumroot, Illinois Wildflowers

Heuchera longiflora, Long-flowered Alumroot," Mt. Cuba Center

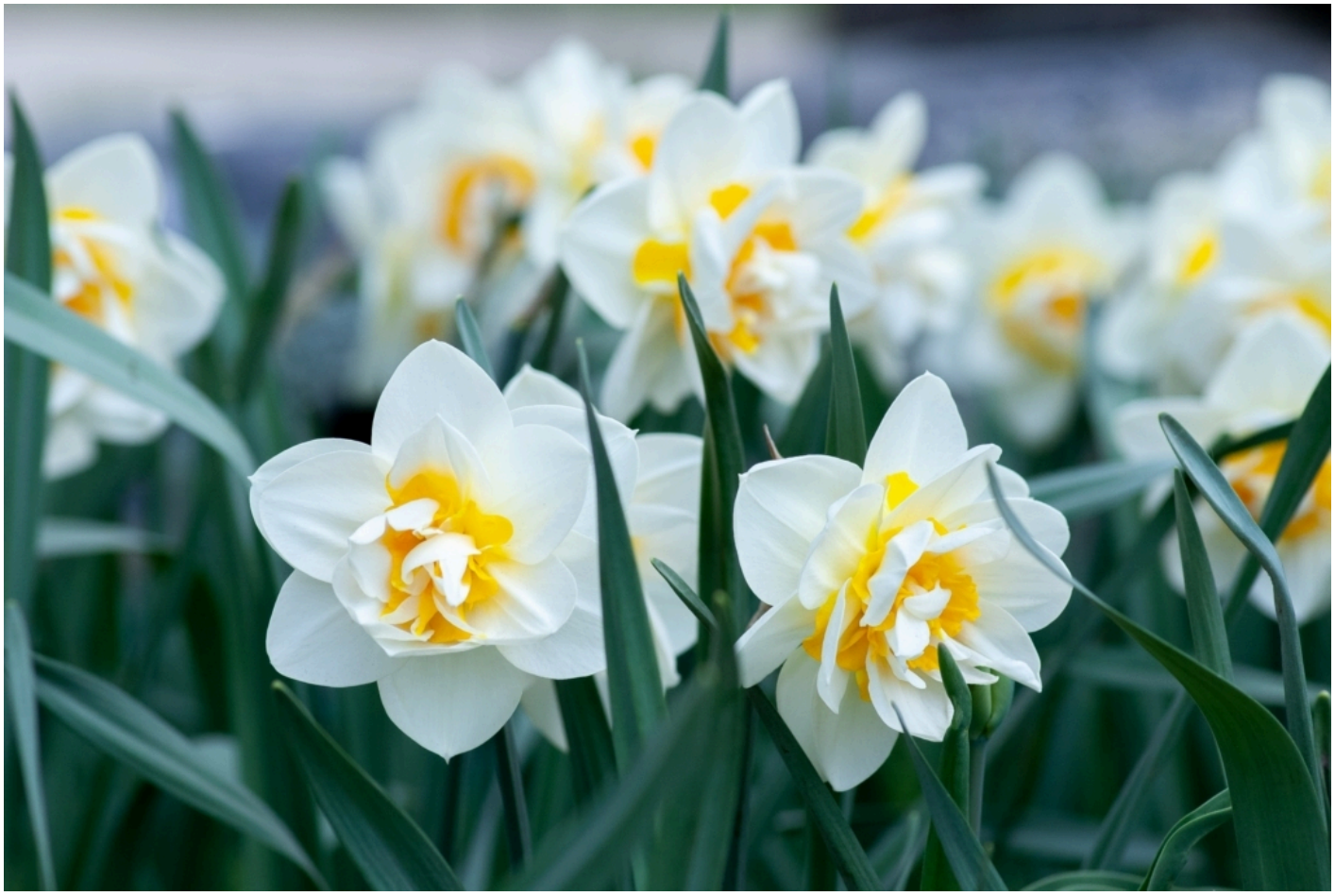
"Black Vine Weevil," Virginia Cooperative Extension

Colletes aestivalus, USGS Native Bee Lab

FEATURE PHOTO: *Heuchera americana,* Bernice Thieblot, Quarry Gardens at Schuyler, VA

Upcoming Events

By Erin Hall | March 2022- Vol.8, No.3



Piedmont Master Gardeners Spring Lecture Series

C. Colston Burrell: *Beauty, Integrity and Resilience—Can a Garden Have Everything?*

Thursday, MARCH 3 | 7:00 pm | Zoom | Admission: $10 | Register online

Do our gardening practices harm the environment? Can we change them to meet our aesthetic goals while supporting the insects and birds we love? Can we create healthy habitats with a mixture of native and exotic plants?

Cole Burrell, an acclaimed garden designer, lecturer, author, and photographer, helps gardeners address such questions as they create landscapes that meld beauty with ecosystem form and function.

Renée Gokey & Christine Price-Abelow*: The Three Sisters — Indigenous Origins and Best Growing Practices*

Thursday, MARCH 10 | 7:00 pm | Zoom | Admission: $10 | Register online

Renée Gokey and Christine Price-Abelow of the Smithsonian Institution's National Museum of the American Indian (NMAI) will explore the history of "The Three Sisters" (beans, corn, and squash teach us how best to grow this powerhouse combination and learn from indigenous gardening practices.

Jayesh Samtani: *Home Garden Berries—Selection, Cultivation, and Growing Alongside Ornamental Plants*

Thursday, MARCH 24 @ 7:00 pm | Zoom | Admission: $10 | Register online

Jayesh Samtani of Virginia Tech's School of Plant and Environmental Sciences will provide an overview of berry production in the home garden and will cover such crops as strawberries, raspberries, blackberries, blueberries, and figs. He will also offer ways to integrate these attractive plants with ornamentals.

Barbara Ryan: *The New Sustainable Garden—Native Plant Garden Designs for Your Home*

Thursday, MARCH 31 @ 7:00 pm | Zoom | Admission: $10 | Register online

Barbara Ryan is the founder and owner of Chain Bridge Native Landscapes LLC in McLean. She holds a Master's Degree in Sustainable Landscape Design from The George Washington University and is a certified Virginia Horticulturist (VNLA), Level 2 Chesapeake Bay Landscape Professional (CBLP), and Fairfax Master Naturalist. Ryan will discuss the roles that native plant communities and layering play in designing effective native gardens that improve biodiversity and sustainability while offering natural beauty throughout the year.

Piedmont Master Gardeners Annual Plant Sale

Saturday, MAY 7 | 10:00 am – 2:00 pm |Albemarle Square

Featuring native plants, bulbs and tubers, herbs, ground covers, pollinators, perennials, drought-tolerant plants, houseplants, annuals, veggies, sun and shade plants, deer resistant plants, trees, shrubs, fruit, Green Elephant sale and more! Bring your problem plants, insects or gardening questions for advice from our experts: VCE Help Desk and Information tables will be onsite. Pick up a soil test kit. Bring your surplus plastic garden pots to be recycled. Tool sharpening available.

Wildlife Corridors: How Native Trees & Plants Can Restore Biodiversity

Monday, MARCH 7 | 7:00 pm | Zoom | Free

presented by the Virginia Beach Master Gardeners

Gardening in the Valley Symposium

Saturday, MARCH 12 | 8:00 am – 4:00 pm | Falmouth, Virginia | Admission: $65

presented by the Northern Shenandoah Valley Master Gardener Association

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Made for the Shade

Saturday, APRIL 2 | 8:00 am – 4:00 pm | Shenandoah University, Winchester, Virginia | Admission: $65

10th Annual Living in the Garden Symposium presented by the Central Rappahannock Area Master Gardeners

Carpet the Soil with Native Plants

By Bernice Thieblot | March 2022- Vol.8, No.3

As we gardeners attempt to merge the design principles of layered landscaping with the goal of using native plants, we often find that final layer—the ground level—to be the most challenging.

As a result, we often default to covering the soil with non-native and exotic plants such as Ajuga, Liriope, and Japanese Pachysandra. Such groundcovers are alien to our native bees and butterflies and may escape into the wild to compete with the native plants. Yet these plants are readily available in garden centers. Some may even be found as flats of small plugs, the most economical way to purchase for mass planting.

It can be more difficult to source native groundcovers. Until now…or perhaps the near future. The Plant Northern Piedmont Natives campaign is part of a state-wide effort to create both demand and supply of locally native plants. In partnership with the PNPN campaign, Piedmont Master Gardener volunteers are engaging with 13 area plant retailers to promote availability and sales.

Consider the following plants to carpet your landscape with beautiful groundcovers that contribute to the ecosystem by attracting and supporting our native bees and butterflies. And if you don't find them, ask your nursery or garden center to stock them.

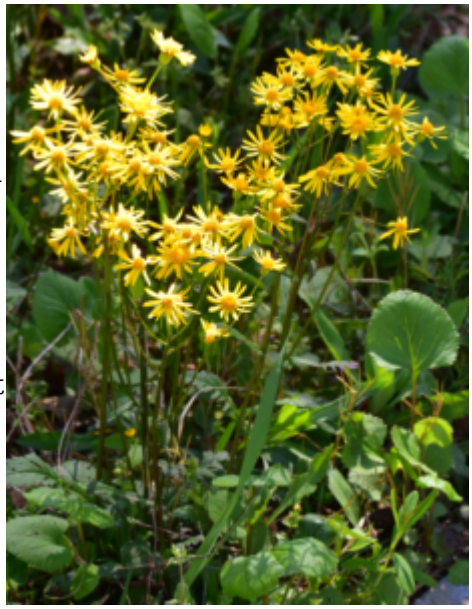
For Sun

Robin's Plantain *(Erigeron pulchellus)*

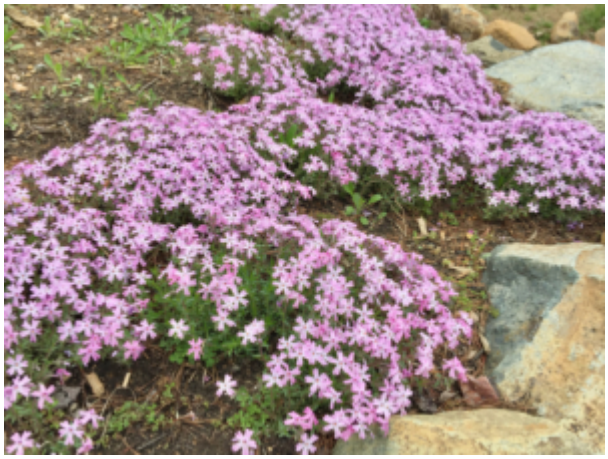
In the Aster family, Robin's plantain is a stoloniferous plant that can form dense colonies. In spring, it produces branching flower heads on stems that may grow to 24 inches before senescing. The small daisy-like flowers are white to pale lavender; the entire plant is covered with tiny hairs. The basel leaves persist to make an effective year-around green groundcover.

Golden Ragwort (*Packera aurea)*

Thriving and blooming in moist shade, golden ragwort/groundsel has attractive rounded basal leaves that remain green through all but the harshest winters. The yellow flowers appear in April on stems up to 2.5 feet high. The plant self-seeds freely, is easily grown from seed, and can form large colonies. Stems should be cut after seed dispersal. Good for wet sites.



Golden Ragwort (Packera aurea)
Photo: Bernice Thieblot



Moss Phlox (Phlox subulata)
Photo: Bernice Thieblot

Moss Phlox (*Phlox subulata)*

Attracting spring's first butterflies, *Phlox subulata*, commonly called creeping phlox, moss phlox or moss pink, glows on dry banks and stone walls. Bloom colors range from white through pinks to purple. Under six inches in height, the plants sprawl to form an evergreen ground cover. Good drainage is essential and trimming back by half after bloom helps to maintain their form. A lawnmower with the blade set high can accomplish this in the right location.

Barren Strawberry (*Geum fragarioides*)

Barren strawberry lives up to its name by producing no edible fruit. What it does produce are semi-evergreen strawberry-like leaves and charming yellow flowers in early to mid-spring. Like strawberries, it spreads slowly by rhizomes. It tolerates some shade and a variety of soil types as long as they are well-drained.

Heath Aster (*Symphyotrichum ericoides* 'Snow Flurry')

'Snow Flurry' is a prostrate cultivar of the three-foot tall species. It forms a low, dense carpet with flowering stems that look a bit like heather. In early autumn, the plants are covered with frothy panicles of tiny white

flowers that draw butterflies and many other pollinators. Perfect for a rock garden or top of wall. Must have sun.

Lyre-leaf Sage (*Salvia lyrata)*

Lyre-leaf sage, named for its leaves' resemblance to a stringed instrument, will grow in a driveway. Its trumpeting, tubular pale blue flowers, borne on stems about a foot tall, are not arresting to us, but bees love them. The basal leaves, showing rich purple veins in cool months, persist year around. A loyal and enthusiastic plant.

Field Pussytoes (*Antennaria neglecta)* and **Plantain-leaved Pussytoes (*Antennaria plantaginifolia)***

Pussytoes are adorable. Two species are most commonly found in the Piedmont. Field pussytoes with velvety, more upright basel leaves, can thrive in the most arid situations. Plantain-leaved pussytoes prefer a bit more moisture, and the leaves are larger and darker. The spring flowers are similar: near-white and fuzzy, looking like tiny cat's feet. They spread by rhizomes and make a dense ground cover. Both are larval hosts for the gorgeous American painted lady butterfly.

Field Pussytoes (Antennaria neglecta)
Photo: Bernice Thieblot

Foxglove Beardtongue (*Penstemon digitalis)*

Like other native penstemons, this one produces beautiful pale tubular flowers on tall stems—not the first thing one looks for in a groundcover. However, once the flowers are finished, the basal leaves persist and can be an effective ground cover. The flowers attract many long-tongued bees. They are called "Beardtongue" because the sterile stamen has a tuft of small hairs. Penstemons do best in sun and well-drained soil.

Virginia Creeper (*Parthenocissus quinquefolia)*

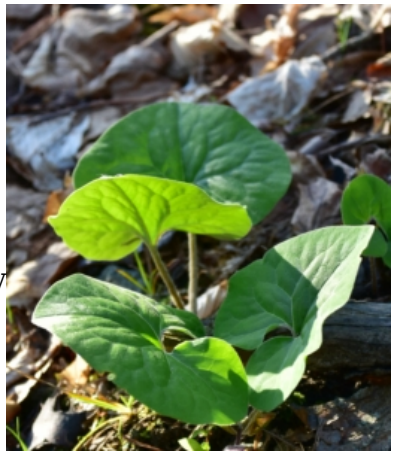
Another native plant that may not be the first to come to mind as a groundcover is Virginia creeper, which can be a deciduous climbing vine or ground cover—or both. Its five-part leaves will carpet any surface in luxuriant green before turning brilliant orange-red in the fall. The purple-black berries are a winter food source for birds. It needs no support to climb buildings or trees; however, its adhesive tips do no harm to either. Vigorous, it tolerates most soil conditions in sun.

Purple Lovegrass (E*ragrostis spectabilis)*

This warm-season bunch grass is native to sandy soils in sun. Its flat, coarse leaves form a somewhat disorganized clump of green foliage rising to about 10 inches. The show begins in August when soft purplish flowers emerge in a loose inflorescence to cover the clump with an airy cloud about two feet tall. The flowers turn brown by October and the inflorescence detaches from the plant to blow along the ground distributing seed.

For Shade

Wild Ginger (*Asarum canadense)* and **Virginia Heartleaf (*Hexastylis virginica)***



Wild Ginger (Asarum canadense)
Photo: Bernice Thieblot

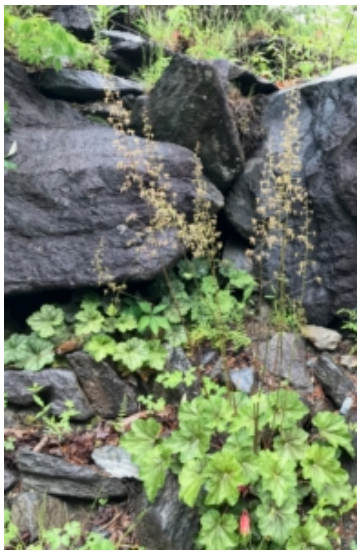
Wild ginger has pairs of large, soft, heart-shaped deciduous leaves. In contrast, Virginia heartleaf produces smaller, variegated, waxy evergreen leaves. With long rhizomes, each can produce a dense ground cover. Their similar, charming “little brown jug” flowers may be found at the base of the plant, hidden by spring leaves. The roots have a ginger-like aroma and a spicy taste, but they are unrelated to culinary tropical gingers. Grow in humus-rich soil in full or dappled shade and propagate by division or root cutting.

Blue Wood Sedge (*Carex flaccosperma)*

Blue wood sedge is an easy-to grow, petite sedge with half-inch wide leaves forming a small clump that slowly spreads by short rhizomes to make a sturdy ground cover. The leaves emerge green and mature to a powdery blue-green. Thriving in moist shade, it tolerates poor drainage and can take partial sun if moisture is consistent.

Eastern Wood Sedge (*Carex blanda)*

With a low, mounded profile the semi-evergreen Eastern wood sedge is a versatile groundcover plant. Plant it in full sun or full shade with moist to semi-dry conditions; it is adapted to disturbed and compacted soils. Like all native carexes, its seeds and leaves are important resources for wildlife.



Alumroot, Heuchera americana
Photo: Bernice Thieblot

Alumroot (*Heuchera americana)*

Alumroot, a/k/a coral bells, is another of those plants that produce tall spikes of spring flowers over beautiful, persistent basal leaves. The slender hairy stalks, which rise 18 inches or more, bear pale miniature bell-shaped flowers over a long season, followed by tiny red fruits. The handsome leaves are deep green, shading to purple or red in fall. Listed as a shade plant, it will tolerate early-day sun if moisture is consistent.

Green and Gold (*Chrysogonum virginicum)*

In dappled shade, green and gold produces masses of deep yellow flowers over a mat of dark green leaves in spring. Each plant spreads rapidly through stolons or rhizomes to 18 inches or more. Short stature—three to four inches—makes it ideal to line pathways. A dependable groundcover until late fall when it goes dormant until spring. Does best in slightly acidic soils; fast drainage a must.

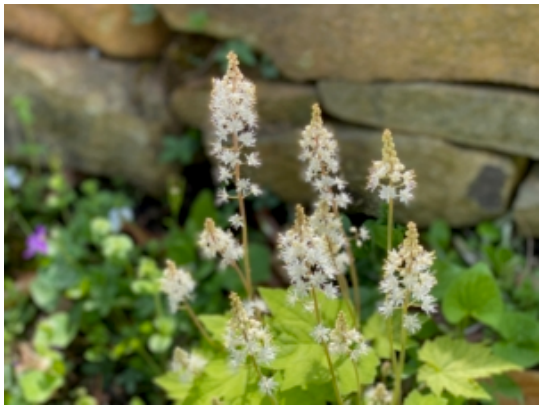
Dwarf Crested Iris (*Iris cristata)*

Magical in the April woodland, the diminutive dwarf crested iris features showy pale blue, lilac, or lavender flowers with gold crests on the falls. The plants spread by rhizomes and quickly naturalize in a moist, partly shaded setting. Flowers are on very short stems. The leaves, 3-6 inches tall, persist throughout the growing season. Watch out for snails and slugs.

Dwarf Crested Iris (Iris cristata)
Photo: Bernice Thieblot

Partridgeberry (*Michella repens)*

Not easy to establish, but rewarding on small sites, prostrate partridgeberry is evergreen and mat forming. Grow in part to full shade in well-drained, moist, organically-rich soil.



Heart-leaved Foamflower, Tiarella cordifolia
Photo: Bernice Thieblot

Heart-leaved Foamflower (*Tiarella cordifolia)*

Evergreen in mild winters, foamflower spreads by stolons, which produce dense clumps of beautiful foliage. The deeply-lobed leaves may have reddish variegation along the stems; in fall they often turn reddish bronze. For up to six weeks in spring, tiny white flowers appear as airy racemes on numerous wiry stems that rise above the foliage to a height of 10-12 inches. Give it shade and consistent moisture.

Woodland stonecrop (*Sedum ternatum)*

The special value of woodland stonecrop is that it will tolerate part shade, unlike other sedums. Sometimes called three-leaved stonecrop, it will form a low mat of small, rounded succulent leaves in a rock garden or hug path stones along a walkway. In spring, clusters of white star-like flowers rise above the foliage. In winter, the creeping stems root at the nodes and break away from the mother plant. Tolerates deer and rabbits.

Woodland stonecrop (Sedum ternatum)
Photo: Bernice Thieblot

Ferns:

Hay-scented Fern (*Dennstaedtia punctilobula)*

The deciduous Hay-scented Fern, so named because its crushed leaves smell like new-mown hay, needs room to run. Its single, fine-textured, bright green fronds, up to two feet tall, spread aggressively by rhizomes to form colonies that can overrun weaker plants in moist shade. Beautiful

and deer-repellant.

Marginal Wood Fern (*Dryopteris marginalis)*

More manageable is the evergreen marginal wood fern, with dark, leathery fronds that rise one to three feet from a central crown. Plant in consistently moist shade; count on using more plants to cover. And enjoy seeing it peek through snow cover.

New York Fern (*Thelypteris noveboracensis)*

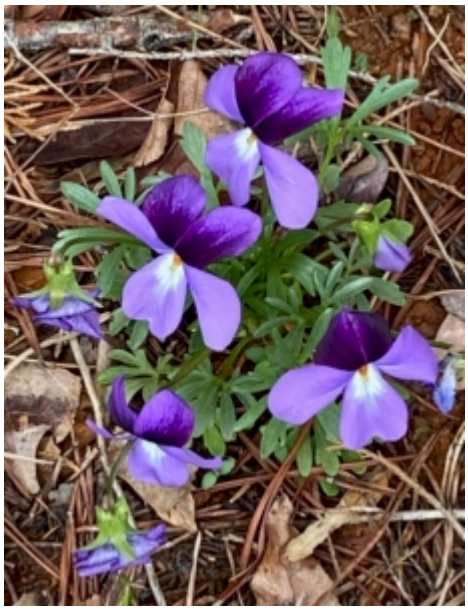
With distinctive blades tapering at both ends, and trailing stolons that send up new fronds each year, New York fern spreads less aggressively than hay-scented. The deciduous fronds are chartreuse-green and rise to one to two feet. In the wild, it grows in marshy wooded areas and near streams. Give it shade and moist, acidic soil.

Violets:

Ah, violets! Blooming in early spring, the sweet-scented flowers are an early nectar source for butterflies. If violets did not volunteer so freely, we would treasure them. Best massed and left to naturalize as groundcover along walkways and under shrubs

Birdsfoot Violet (*Viola pedate)*

The birdsfoot violet is so named for its leaves' resemblance to a bird's foot, and is an exception in that it is more difficult to grow than other violets. The plants usually have bi-colored flowers, with upper petals darker purple and lower ones light blue. They want full sun and *very* well drained soil.



Birdsfoot Violet (Viola pedate) Photo: Bernice Thieblot

Common Blue/Confederate violet (*Viola sororia)*

The common blue or Confederate violet features downy heart-shaped basal leaves and large blue-violet flowers from April and occasionally into August. They prefer humusy, moisture-retentive soils in full sun to part shade. Those with purple-veined white flowers are called Confederate violets. The foliage hosts fritillary butterflies.

Parting Advice

Rather than large areas of a single species of groundcover, consider planting graceful swathes of different species to make a natural tapestry. Consider the contrasting textures and colors of leaves and blossoms.

Avoid planting groundcovers into heavy mulch. You want to be certain that roots are well-seated in soil, crowns are not smothered, and above-ground stolons can reach soil easily.

Many of the plants described above will be available at the Piedmont Master Gardeners' Spring Plant Sale on May 7.

Resources

Digital Atlas of Virginia Flora

Missouri Botanical Garden

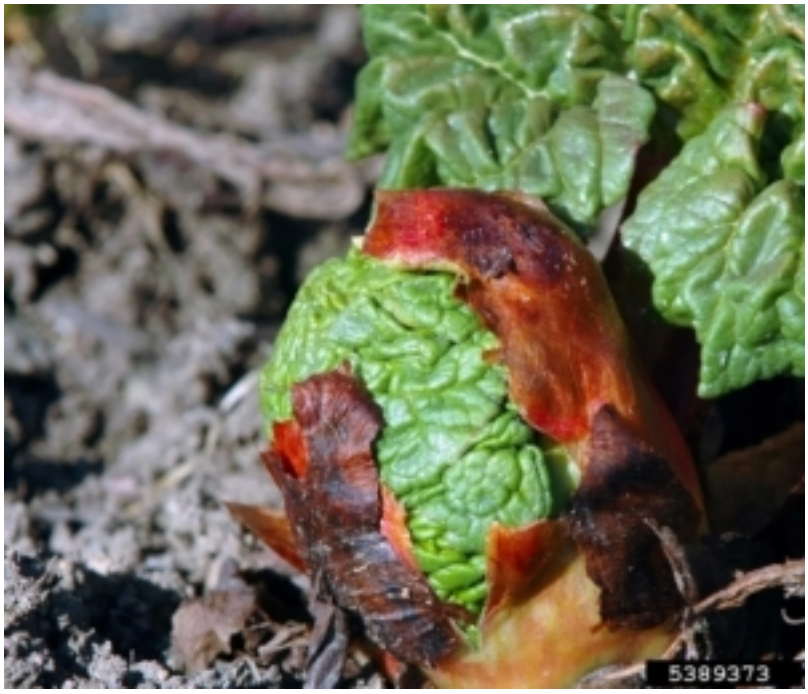
Albemarle County Recommended Native Plants

North Creek Nurseries

Prairie Moon Nursery

Rhubarb: Versatile, tart, and delicious

By Chris Stroupe | March 2022- Vol.8, No.3



This bud's for all of us. Photo: Bonsak Hammeraas, NIBIO – The Norwegian Institute of Bioeconomy Research, Bugwood.org, CC BY-NC 3.0)

Rhubarb buds might be my favorite sign of spring. Native to Siberia and introduced into North America by European colonists in the 1700's, *Rheum rhabarbarum* is a versatile perennial that kicks off the growing season. Once it's ready to harvest, you'll be rewarded with attention-grabbing tartness and fresh, grassy flavor. Varieties have red or green stalks, but all are delicious. In this article, I'll discuss how to grow rhubarb plants, optimize yields, and use it in delicious desserts and side dishes.

Remember that rhubarb leaves are poisonous. Oxalic acid is the main toxin in this plant. Practically speaking, you would have to consume more than a pound of leaves to endanger your health, but it's best to be careful. Here's a description of oxalic acid poisoning from the National Institutes of Health. Symptoms include burning and blisters in the mouth and an upset stomach.

If you suspect oxalic acid poisoning, do not induce vomiting and call Poison Control at 1-800-222-1222.

Planting

Crowns are the easiest way to start rhubarb plants. A rhubarb crown is located just beneath the soil surface; the stalks and roots emerge from a crown. These can be purchased bare or in pots. It's fine – maybe even preferable – if potted crowns have a stalk or two already emerging. Large crowns from well-established plants can be divided and propagated, as discussed below. Plant crowns early in the spring, as soon as the soil can be worked.

Before planting, prepare the soil. A soil test is always a good idea, to ensure sufficient nutrient levels. Results from a soil test will also reveal if soil pH should be adjusted. Aim for a slightly acidic pH, between 6.2 and 6.8. The Virginia Tech soil testing lab will provide amendment recommendations with test results. Finally, add compost to optimize soil quality. Rhubarb grows best in well-drained soil with plenty of organic matter. For Virginia clay, a good rule of thumb is to work 4 inches of compost into the top 12 inches of soil. That's a lot of compost and a fair amount of work, but it will be worth it.

When planting, dig holes deep enough so that the buds on crowns will be 1 to 2 inches below the surface of the soil. If planting crowns from pots, soil level in the garden should be the same as the soil level in the pot. Space the holes 3 feet apart, in rows that are 5-6 feet apart. Place crowns in holes with buds pointing upwards, then backfill. Scatter a handful of 10-10-10 fertilizer around each planting site. Water thoroughly, but not excessively.

Rhubarb can also be started from seed. One advantage of this approach is that more varieties are available from online or catalog sellers. The disadvantage is that it can take an extra season before the plants are vigorous enough to harvest. Start seeds indoors, 5 or 6 weeks before the last frost. Harden off the seedlings after danger of frost is past, then plant as described above.

Cultivation

Climate is probably the main challenge when growing rhubarb in Virginia. Rhubarb grows best where summers are relatively cool, with an average temperature of 75°F. Rhubarb crowns also require 500 hours of temperatures below 50°F to stimulate stalk growth. Virginia winters are usually cold enough, but summers can be problematic. If possible, choose a site with afternoon shade. If this is not an option, consider using “shade cloth” to keep plants from overheating.

Otherwise, growing rhubarb is pretty easy. Irrigate, so that soil stays moist, but do not over-water, as this can lead to crown rot. Mulch, such as straw, will help maintain soil moisture. Fertilize established plants in early spring with 20 lbs. of 10-10-10 fertilizer per 1000 square feet of bed. After harvest, side-dress with 2 lbs. of ammonium nitrate per 1000 square feet.

Vigorous plants will form flowering stalks. These stalks are round in cross-section (see photo above), as opposed to the oblong-shaped leaf-bearing stalks that we eat. Remove flowering stalks as soon as they appear, or they will divert energy and nutrients from crowns and leaf-bearing stalks.

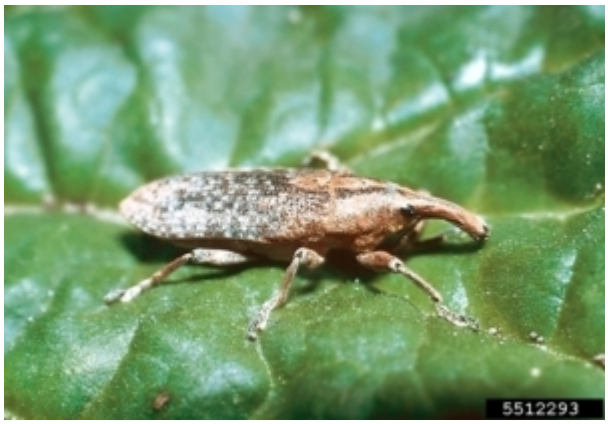
Flowering stalks. Ideally, trim them before they get this tall. Photo: Johan~commonswiki., CC BY-SAS 3.0 license.

A crown ready for dividing. Photo: BenTheWikiMan.

Dividing crowns

Rhubarb crowns should be divided every 5 to 6 years. A crown is ready to divide when the stalks emerge around the outside of the crown, not in the middle (see picture).

Divide crowns when plants are dormant, in late winter or early spring. Dig around and under each crown, about a foot down, to separate it from its roots. Pull crowns out of the soil and brush or wash them off. Using a sharp spade or knife, cut into chunks with 2-3 buds each. Remove and discard any soft or rotten bits. Replant as described above.



Rhubarb curculio or weevil, Lixus concavus. Photo: Kansas Dept. of Agriculture, CC BY-NC 3.0.

Diseases and pests

Crown rot is the primary disease that infects rhubarb. The major symptom is wilting of stalks and leaves, followed by rapid collapse and death of the whole plant. Water-soaked spots may appear at the base of stalks. *Phytophthora* causes most crown rot, though *Pythium, Rhizoctonia* and *Botrytis* can also be at fault. Regardless, the only

solution for crown rot is prevention, because crown rot can't be halted once it sets in. To avoid crown rot: 1) maintain good drainage by incorporating plenty of organic matter in the soil; and 2) do not over-water. As mentioned above, mulch is a great way to keep soil moist without adding too much water.

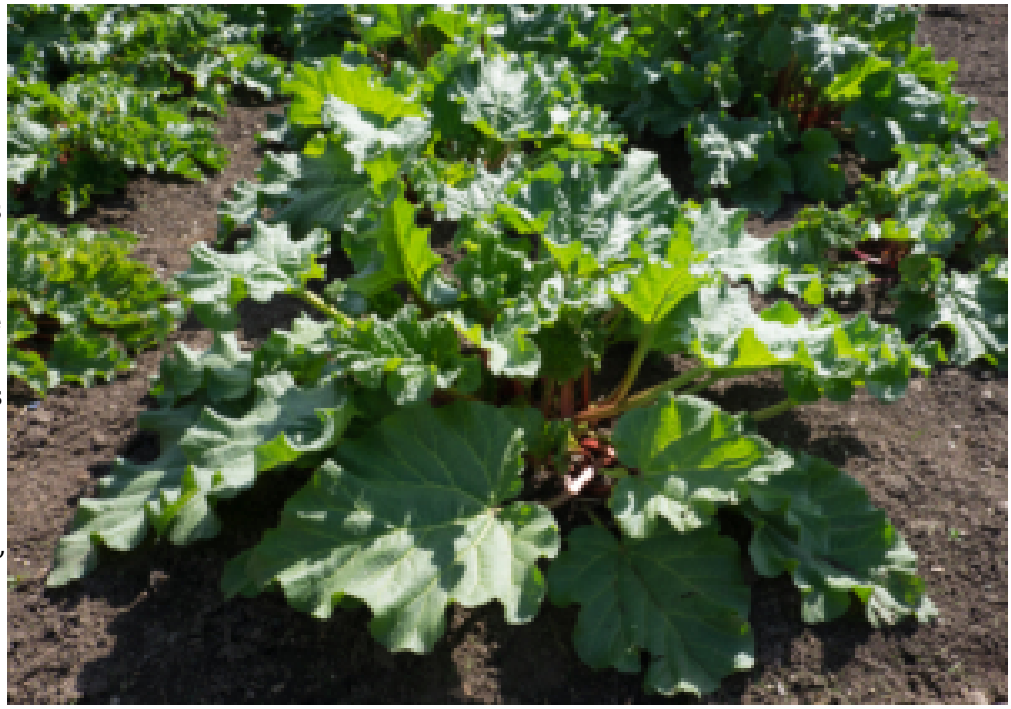
The major pest is the rhubarb curculio, sometimes called the rhubarb weevil (*Lixus concavus*). This cute little bug is about ½ inch long, with a long, curved, flat-ended snout (see picture). The curculio is brown or rust-colored, but it's often covered in yellow pollen. Curculios don't actually eat rhubarb, but they punch holes in stalks and crowns to lay their eggs. These holes leak sap, reducing the plants' vigor and promoting fungal diseases. Prevent rhubarb curculio infestation by keeping beds clear of curly dock (see picture), a weed that happens to be their preferred food source.

Curly dock, the weed that the rhubarb curculio prefers to eat. Photo: Anthony D. White, The Ohio State University, Bugwood.org, CC BY-NC 3.0.

Harvest

In the first year after planting crowns or seedlings, don't harvest rhubarb at all. In the second year, harvest only 2 or 3 times, spread out over 4-6 weeks. In subsequent years, harvest 3-5 times over 8-10 weeks. A general rule is not to harvest more than about ⅔ of the stalks at once. If new stalks are very skinny or pencil-sized, stop harvesting.

Harvest stalks after their leaves are fully grown, usually when they're smooth, not crumpled. Do **not** cut the stalks because the cut ends can let rot-causing pathogens into the crown. Instead, grab a stalk at the base, then twist and pull upwards. It might be necessary to rock the stem back and forth a couple times to loosen its connection to the crown. The attachment point should be visible at the bottom of the harvested stalk, and will look like the bottom of a celery stalk.



Harvest time. Photo: DeFacto, CC BY-SA 4.0

Cut the leaves off the stalks as soon as possible to delay wilting. It's okay to compost the leaves, but be sure that pets and children can't get to them, due to their toxicity.

Rhubarb will go dormant in summer heat, particularly in warmer zones, but it may resume growing when cooler weather returns. Feel free to harvest judiciously at this point, as described above. Rhubarb is delicious in the fall too, particularly along with apples.

Storage

Of course, rhubarb is best enjoyed fresh, but it can be stored in the refrigerator for a couple of weeks. This is especially important when waiting for strawberries to ripen. Wrap stalks in aluminum foil (moderately tightly), but don't crimp the foil. Keep in a "crisper" drawer of the refrigerator. The goal is to keep the stalks moist, while preventing buildup of ethylene gas that will make them go soft.

Rhubarb also freezes well. Wash and dry the stalks, then cut them into 1-inch pieces, seal in a plastic bag, and place in the freezer.

Cooking

Recipes featuring rhubarb are plentiful in books and online. Classics like the "Joy of Cooking" are my go-to sources. Here are a few of my favorite ways to prepare rhubarb:

• Cobbler, alone or with strawberries or apples! This works well covered with cornmeal biscuits.

• Pie, with or without strawberries or apples.

• Compote (chopped rhubarb cooked down with sugar to a sort of jelly), which is great as an ice cream topping. Also delicious in place of, or along with, strawberry shortcake and whipped cream.

• Roasted: Cut into chunks and toss with sugar and maybe some spices, such as cinnamon, vanilla bean

seeds, or cardamom. Then roast at 350°F for 25-30 min.

• Savory – really! Great side dish for beef, roasted with red wine (and a little sugar).

References and Further Reading:

Featured photo: Rhubarb stalks by Jeremy Keith, CC BY 2.0

Growing rhubarb in home gardens University of Minnesota Extension

Rhubarb (Publication 438-110) Virginia Cooperative Extension

Rhubarb in Home Gardens University of Tennessee Agricultural Extension Service

Rhubarb, *Rheum rhabarbarum* Wisconsin Horticulture Division of Extension

Will that plant grow here? North Carolina Cooperative Extension