MGNV Master Gardeners of Northern Virginia
Arlington • Alexandria • mgnv.org

Native Spring Ephemerals Addendum: Additional details and Answers to Chat Questions

There were a number of general questions posed during the Q&A sessions or in the chat box:

To respond to the comment questioning the **value of ephemerals** in a garden as compared with "perennials that come back each year from vegetation," I would reiterate one of my introductory statements: ephemerals ARE perennials. They just are present in the landscape for a shorter period of time each year than other perennial plants. Because they bloom before many other plants and serve as important early sources of nectar and pollen for our native insects, I feel they deserve a place in the succession of blooming plants in the garden.

There were attendees to the live presentation from various regions within Virginia and from other states, and a question was posed about which plants would be appropriate to grow outside of Northern Virginia. In general, the native ephemerals described in the talk have a **native range** that includes most of the Mid-Atlantic and sometimes stretches somewhat north and west as far as Michigan and Missouri.

- Two sources of information on the native ranges of plants are the Plants Database of the USDA and Native Plants Database of the Lady Bird Johnson Wildflower Center where plant species can be entered to determine in what states they are located.
- For more precise, county by county information, Virginia residents can check the Digital Atlas of the Virginia Flora.
- Maryland residents can utilize the Maryland Plant Atlas.
- Delaware residents can use the Flora of Delaware Online Database.
- Pennsylvania residents can search the Pennsylvania Flora Project of Morris Arboretum.
- Information can also be obtained by checking with the Cooperative Extension unit in a given region or with the native plant society for a particular state.

A viewer asked for a reminder of the **native-only plant sellers** I mentioned. You can see a list of sellers in Northern Virginia and slightly further afield on the website of Plant NoVA Natives. You can check their respective plant lists to determine which ephemerals, if any, they provide.

Ephemerals can be **planted** in during the cool weather in either the spring or the fall.

The native spring ephemerals I discussed (and native plants in general) **do not require fertilization**. They will grow well as long as the proper soil, water, and light requirements are met.

Another viewer inquired about suggestions for **improving the growth of ephemerals**.

- As I mentioned in the talk, the annual growth rate of spring ephemerals is very slow, and it may take as long as 3 to 7 years before some plants flower.
- Environmental factors affecting their growth include the appropriate amount of light in the spring to warm the soil, sufficient water in the fall when their root systems are established, and rich forest soils to provide for their high nutrient needs.
- See a scholarly article by a biologist at the Université Laval on the subject for fuller details.

I mentioned that a number of ephemerals do not handle **winter moisture** well. A viewer inquired which species might do well in a garden that stays moist.

- In general, ephemerals do best in soils that are consistently moist but not soggy. This is because their storage organs (bulbs and corms) require good drainage to prevent rotting.
- Several species that grow in floodplains or standing water, such as Virginia Bluebells (*Mertensia virginica*), Yellow Trout Lily (*Erythronium americanum*), and Marsh Marigold (*Caltha palustris*), might be more successful in wetter conditions.

One viewer asked whether ephemerals would "do well in **pine straw** beds."

- The life cycle of ephemerals is synchronized to the rhythm of woodland deciduous trees, and in natural settings they will grow up through leaf litter in humus-rich soil. They shouldn't be planted under evergreen trees like pines because they won't have the proper light conditions of the open canopy to stimulate spring growth.
- As far as mulching ephemerals, the recommendations that I have read specify shredded leaves.
- If used as a mulch in open beds, the slight acidity of pine needles shouldn't be a problem as many of the ephemerals prefer somewhat more acidic soil conditions, anywhere from 4.5 to 6.8.
- Twinleaf (*Jeffersonia diphylla*) is the exception, tolerating and perhaps preferring calcareous soils with an alkaline pH of 7 to 8.

Penn State Extension has a very helpful article regarding **resistance to Black Walnut** and the allelopathic chemical juglone that it exudes.

- Resistant ephemerals on their list are: Bloodroot (*Sanguinaria canadensis*), Dutchman's Breeches (*Dicentra cucullaria*), Mayapple (*Podophyllum peltatum*), Spring Beauty (*Claytonia virginica*), Trillium species, and Virginia Bluebells (*Mertensia virginica*).
- A list compiled by Prairie Moon Nursery also includes Cutleaf Toothwort (*Cardamine concatenata*) and Marsh Marigold (*Caltha palustris*).

Regarding **deer resistance**, our local Cooperative Extension agent, Kirsten Conrad says that "some plants are resistant to some deer some of the time." The experiences of individual gardeners may vary, depending upon their local circumstances.

- The interactive database on the website of Rutgers University ranks landscape plants by deer resistance.
- The Home & Garden Information Center of University of Maryland Extension also has a list of deer-resistant native plants. Ephemerals on this list include Bloodroot (*Sanguinaria canadensis*), Squirrel Corn (*Dicentra canadensis*), Mayapple (*Podophyllum peltatum*), Rue Anemone (*Thalictrum thalictroides*), some Trilliums, and Virginia Bluebells (*Mertensia virginica*).
- Plants with toxic components in their leaves, sap, and roots are less likely to be consumed.
- Human scavengers, rather than deer predation, may be the cause of the decline of ephemeral plants in some areas.

There were also questions about specific plants or plant families:

I mentioned several native **anemones** during the talk.

- I provided details on Canada Anemone (*Anemone canadensis*) and mentioned another, Wood Anemone (*Anemone quinquefolia*), that is also ephemeral.
- Another native anemone which is not ephemeral is Tall Thimbleweed (*Anemone virginiana*).

While two members of the **Bleeding Heart Family**, Dutchman's Breeches (*Dicentra cucullaria*) and Squirrel Corn (*Dicentra canadensis*) are ephemeral, another native wildflower, Wild Bleeding Heart (*Dicentra eximia*) continues to be present through the growing season.

A question was posed in the chat regarding consumption of leaves of plants in the **Miner's Lettuce and Mustard families.**

- The leaves, flowers, and corms of Spring Beauty (Miner's Lettuce Family) are all edible, and the corms are considered quite tasty.
- The leaves and roots of Cutleaf Toothwort (Mustard Family) are also edible. I would personally not eat these plants because it would reduce their ability to reproduce in my garden.
- On the other hand, eating the young leaves of invasive Garlic Mustard would be fine!

Squirrel Corn (*Dicentra canadensis)* apparently gets its name from the underground food storage structures (corms) that resemble corn kernels which are favored by squirrels and other small rodents.

In response to question about **Twinleaf** (*Jeffersonia diphylla*), its seeds have elaiosomes, the fat- and protein rich outgrowths that attract ants. The seeds are collected and dispersed by them through the process referred to as myrmechocory.

One viewer inquired whether a number of **other plants** (Green-and-Gold, Wild Ginger, Robin's Plantain, Golden Ragwort, and Woodland Poppy) would be classified as ephemerals. While they bloom in the spring, they have a longer lifecycle throughout the growing season, and I would refer to them as "spring-blooming wildflowers" or "spring-blooming perennials." (Of course, ephemerals are also perennials, but we emphasize their short lifecycle in describing them.)

There were also several questions or comments of general interest:

I described the petals of Yellow Trout Lily as being **"retroflexed,"** meaning that they were bent back. I believe I was repeating a description I had read about the plant.

- Some botanical glossaries define retroflexed as "turned backwards" but others define that term as "bent this way and that, in different directions."

- Most glossaries use the term **"reflexed"** to mean bent back.

There was some chat box discussion regarding the **suppression of invasive non-native Lesser Celandine** (*Ficaria verna*) which can pose a threat to spring ephemerals.

- Participants recommended smothering rather than digging or mowing as the tubers can break apart and remaining roots can permit further spread.
- If hand digging it attempted, it needs to be very thorough with monitoring for growth from anything missed. All plant materials should be bagged and disposed of and not composted.
- Sheet mulching with a 6-inch-deep layer of wood chips is a possible control method.
- Be certain to identify the plant correctly as it superficially resembles native Marsh Marigold (*Caltha palustris*).

One participant inquired whether a woodland garden created with native plants would be considered a **restored native area**.

- Planting a woodland garden with native plants, especially when establishing layers of canopy trees, understory trees, shrubs, and ground layer plants, is a positive step toward rebuilding soil, managing water, and supporting wildlife.
- I wouldn't consider it a "restored area" unless you were able to determine the nature of the original plant community (the exact plant species, local ecotypes, and their specific natural proportions) to reestablish a fully functioning ecosystem.
- You may be interested in reading about the restoration work of Earth Sangha, a volunteer-based organization which operates the largest ecological restoration nursery in the Washington, DC area. They have created a "Wild Garden Manual" that lists plant species appropriate to four different landscape scenarios so that gardeners in the region can be more informed about appropriate natural plant communities rather than just randomly selecting the native plants that appeal to them for aesthetic reasons.