MGNV Master Gardeners of Northern Virginia
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Native Plants Species and Cultivars Addendum

Additional Details and Answers to Chat Questions*Elaine Mills, presenter of "Native Plant Species & Cultivars"*

Regarding the question about **whether Purple Coneflower (*Echinacea purpurea*) is native to Northern Virginia**:

- While Purple Coneflower is popular for use in gardens in Northern Virginia and grows well there, it is not native to the East Coast.
- In doing research for our MGNV fact sheet on the plant, Master Gardener Mary Free found that its natural habitat is centered in Illinois, Missouri, and Arkansas. All populations in Virginia are apparently escapes from cultivation.
- The Lady Bird Johnson Wildflower Center website lists the plant's native range as "GA to extreme northeast TX, north to NC, OH, IL & IA."
- The Missouri Botanical Garden website describes it as "native to moist prairies, meadows, and open woods of the central to southeastern United States (Ohio to Michigan south to Louisiana and Georgia)."

In response to an excellent question regarding **seed saving from cultivars**:

- The naming of cultivars for sale in the horticulture trade makes no distinction between those that are the result of a natural mutation and those that are produced through selective breeding for desired traits.
- For example, *Lonicera sempervirens* 'John Clayton' is a yellow-flowered mutation that was found in 1991 in the grounds of a church in Gloucester, Virginia, while *L. sempervirens* 'Manfrich' was derived through breeding from another cultivar, 'Magnifica'.
- Cultivars of the first type that are propagated via open pollination (sexual reproduction) will produce seed that "comes true." That means that the offspring will resemble the parent plants with some genetic variability.
- Cultivars produced through selective breeding are propagated via cloning to retain the desired characteristics. Any seed that they produce will not come true.
- Some cultivars produced through breeding are even sterile through replacement of sexual parts by extra petals or manipulation to increase the bloom period, and these will not produce any seeds.
- Those who wish to collect seed from cultivars for growing additional plants will need to know the provenance of the plant to understand whether it will be possible to collect viable seeds.

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In reference to a question regarding relative benefits to caterpillars and pollinators from the native **Chokeberries or Chokecherry**:

- **Black Chokeberry** (*Aronia melanocarpa*) attracts bees, especially Mason bees (*Osmia*) and Mining bees (*Andrena*) for its pollen and nectar, and it serves as a larval host to 29 species of Lepidoptera, including the Coral Hairstreak butterfly and Bluish Spring moth. Birds, including cedar waxwings, bluebirds, chickadees, and titmice enjoy the fruit which ripens in July.
- The flowers of **Red Chokeberry** (*Aronia arbutifolia*) are also visited by numerous pollinators, and its fruit remains into the winter, providing food for birds and mammals.
- **Purple Chokeberry** (*Aronia* x *prunifolia*) is considered to be a natural hybrid between the previous two species. Butterflies are attracted to its floral nectar and birds consume Its fruits which ripen in late summer and persist well into the winter.
- **Chokecherry** (*Prunus virginiana*) attracts bees and butterflies for nectar, and it serves as a larval host to some Lepidoptera (including some western species). The fruit is an important food for birds, and small mammals consume the seeds.
    - The Lady Bird Johnson Wildflower Center website states that tent caterpillars often construct webs in the branches of this plant.
    - NOTE, also, that while the fruit of the chokeberries is highly nutritious and can be consumed by humans, plant parts of chokecherry are toxic, and children have died after ingesting large quantities of berries.
- For information on how other woody plants support pollinators, see the recording of a class I offered for Pollinator Week in 2023 titled "Native Trees & Shrubs for Pollinators."

In response to a question about the **comparative quality of pollen and nectar** between species and pollinators:

- The only study with reported results that I am aware of is Annie White's measurement of nectar in *Lobelias,* discussed in my presentation, and that compared straight species with hybrids.
- Several Mt. Cuba reports acknowledge the need for studies on this topic when showing results of pollinator visitation, but they have not provided any further data.
- Jen Hayes, the graduate student working on her PhD at Oregon State University, has collected both nectar and pollen samples from West Coast species and cultivars, but as of my last conversation with her, laboratory analysis has not yet been completed.

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Regarding a **potential labelling system** to help buyers know which species or cultivars are helpful to pollinators:

- I'm doubtful whether such a system could ever be set up as there is not even a standard format for names on plant tags. Some breeders omit scientific names completely or use a simplified form, such as *Echinacea* 'Sunrise,' which does not make it clear that the plant is a hybrid cross between two or more species.
- As I pointed out in the comments on seed saving above, even when a cultivar has a complete name, neither its origin nor manner of propagation is clear. Most customers wouldn't be aware that they might want to research a plant's provenance or performance in plant trials to have a fuller picture of its value to wildlife.
- Another roadblock to a comprehensive labeling system is the fact that plant breeders are largely focusing on making cultivars appealing to gardeners. This can be seen in their use of highly descriptive names ('Screemin' Yellow,' 'Rockin' Raspberry,' 'Pink Double Delight,' Sugar Buzz®). Even when they tout a plant as "pollinator-friendly" they are doing that to make a sale, and they may not have concrete data to back up that claim. That generalized term refers to pollinators as a group without specifying whether it is bees, wasps, flower flies, butterflies, or hummingbirds that are supported.
- Dr. Douglas Tallamy has compiled quantified data by plant genus for larval host support, and Jared Fowler and Sam Droege have compiled comparable data on the genera most supportive of pollen specialist bees, but this information is only on straight species plants, not cultivars.
- I am hopeful that my summary of results on pollinator visitation from science-based plant trials will be helpful to gardeners in making plant selections, but there are countless varieties of plants available in the trade that have not been tested.

For information on **deer-resistant native plants**:

- Please see the list of Native Plants Rarely Damaged by Deer on our MGNV website.
- You may also be interested in viewing the recording of an excellent presentation on "Browsers of the Garden Buffet: Strategies for Dealing with Deer."

For future reference, here are links to the native plant societies for Mid-Atlantic states:

- Virginia Native Plant Society
- Maryland Native Plant Society
- New Jersey Native Plant Society
- Delaware Native Plant Society
- Pennsylvania Native Plant Society
- These organizations, as well as the website for Plant NoVA Natives, have lists of native-only plant sellers and seasonal plant sales.