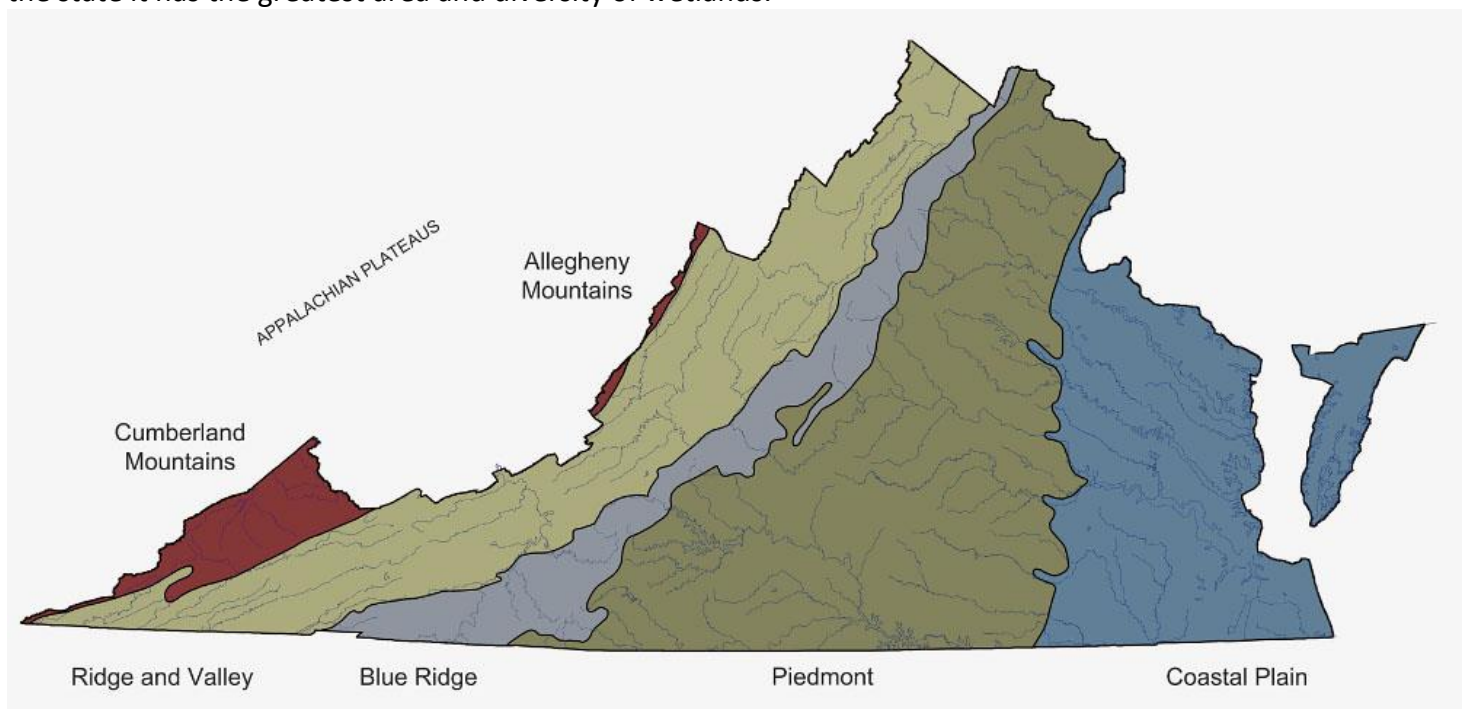


Native Plants

By Lauren Ragsac

You may have heard the term “native plant” or seen the label “native” on plant tags at local nurseries. But what does that really mean? Understanding what makes a plant native requires a deeper scientific dive into the specifics of what determines whether a plant is indigenous to our area. A **native plant** is defined as a plant that occurs within a natural range and in particular habitats where over the course of evolutionary time it has adapted to physical and chemical conditions and co-evolved with other species. You may be wondering what determines “natural range”. Does that mean the City of Chesapeake, the Hampton Roads region, or the state of Virginia? This is where the scientific definition of natural range matters because physical conditions like climate, hydrology, geomorphology, topography, and soil chemistries are not aligned with political boundaries. Rather, these physical conditions are tied directly to geologic history, long before state or county lines were drawn. From a scientific perspective, then, area—known as **physiographic province or ecoregion**—is instead determined by these conditions. In Virginia physiographic provinces are generally defined by their relative elevation, relief, geomorphology, and lithology. It is these features that are most useful in describing large-scale vegetation patterns, also referred to as native plant communities. For example, geologic substrates and the soils derived from them strongly influence the distribution and diversity of plants in Virginia. These soils, in combination with climate and hydrology, determine which species can colonize and spread in a particular habitat. These ecoregions cover relatively large areas of land or water, and contain characteristic, geographically distinct assemblages of natural communities and species. Ecoregions are delineated by the Environmental Protection Agency using a system that goes from broad areas (Level I) to more narrowly defined areas (Level IV). The United States has twelve Level I ecoregions. Nested within these broader ecoregions are 104 Level III ecoregions. Level III ecoregion is generally accepted as the standard for choosing native plants for your local planting project. Virginia is notable in that it has five Level III ecoregions. The City of Chesapeake is in the Coastal Plain ecoregion, which covers about 21% of the state. Of all the provinces in the state it has the greatest area and diversity of wetlands.



References: Virginia Dept. of Conservation and Recreation, Division of Natural Heritage, ver. 2.0, March 2021. (www.vcr.virginia.gov)

It is important to be aware of another aspect of what makes a plant native to a particular area: co-evolution. This is key to understanding why native plants are better at supporting local wildlife and greater biodiversity than plants that are native to other parts of the world (exotics) and why they are better adapted to local conditions. It also helps us to understand that the plants themselves have co-evolved to grow in communities such that the timing of their emergences, growth, flowering, fruiting and senescence are all part of a delicate balance, in tune with the animals that interact with them. The study of this timing is known as **phenology**. These cyclical and seasonal phenomena are influenced by variations in climate, as well as habitat factors. For example, a native plant that produces berries late in the fall provides fruit that is higher in fat for local bird species that are preparing for long migrations. Other native plants bloom in timing with the emergence and life cycles of native pollinating insects. Some of these pollinating insects are specialists, in that they can only feed on one or two genera of plants. If the landscape is missing these native plants then the insects cannot survive or complete their lifecycles (think Monarch butterflies and milkweed). Native plant communities are better at creating stable and complex food webs than any assemblage of exotic plants. And stable food webs lead to greater biodiversity. In sum, native plant communities are better at providing ecosystem functions.

Where Can I Get Native Plants?

Finding native plants can sometimes be a bit of a challenge, because ideally plants that you buy should be descended from the same Level III ecoregion as the planting site. Even seeds that you plant should ideally be from plants growing in the same Level III ecoregion. The South Hampton Roads chapter of the Virginia Native Plant Society website (www.vnps.org) is a great place to learn more about native plants. Click on the chapter's Resources tab for links to publications. Their website also lists native plant nurseries in Virginia. The Chesapeake Bay Native Plant Center is another resource for selecting plants for your area (www.nativeplantcenter.net/plants). There you can search plants by region, plant type, sun exposure, soil texture, and soil moisture. Though most of the City of Chesapeake is in the North Carolina Sounds watershed, native plant resources tied to the Chesapeake Bay watershed are appropriate references for our area. Plantvirginiannatives.org is another great resource.

When shopping at local nurseries, you will likely find varieties, or cultivars, of native plant species. Many varieties of native plants have been bred for certain characteristics such as flower color, leaf color, size, bloom period, etc. You might also find native plants being sold as straight species, meaning that they have not been purposely altered through selective breeding. The use of straight native vs. cultivars should be determined based on the "right plant, right place" principle. However, it is best to avoid cultivars of natives that have been significantly altered for leaf color or flower structure and color, because these alterations take away from the plant's ability to support local wildlife. Plants that you ultimately select should always be well suited to your site conditions. Many of our native plants are very well suited to challenging conditions you may have on your site, such as poorly drained silty or clay soils, or low-fertility, dry sandy soils.