

Wildflower of the Year

By: Adam Downing, Virginia Cooperative Extension

We are more than half-way through 2011. Do you know what Virginia's wildflower of the year is? You might as well not even try guessing because it's on a plant that most folks don't even think of as having flowers.

The Virginia Native Plant Society designates a wildflower each year to represent the beauty and preference of natural/native plants in Virginia's landscapes as opposed to non-native and sometimes invasive plants. This year they chose the white oak. *Quercus alba* is an awesome tree but you might not think of it as a flowering sort.

Angiosperms are flowering plants and most anything that comes to your mind as a plant is an angiosperm. Most of the broad-leaved shrubs and bushes in this region flower, although some, like the white oak, are somewhat inconspicuous. These flowers, once pollinated (often by insects), produce seed, in some cases we call this fruit, especially if the seed is surrounded by something we like to eat like apples, blackberries or watermelon.



White oak flowers are reddish-green and can easily be overlooked. Search for them in the spring, when new leaves are emerging. Photo by: John Hayden, Native Plant Society Botany Chair.

Gymnosperms, on the other hand, produce seed a bit more simply by forgoing the flower mechanism and often rely on wind to carry the spores for reproduction. Pines, spruce, fir and ginko trees are well known gymnosperms. Great trees, but they simply don't flower.

Oaks, maples, hickory, ash, and beech, on the other hand, do flower. Their flowers are not as showy as some of the native companions such as dogwood, viburnum and redbud, but they flower nonetheless. And the flowers of the white oak tree are not only uniquely beautiful but also very important.

To begin with, white oak is in the group of flowering plants termed monoecious. This simply means that both male and female flowers occur on the same tree. The male flowers are slightly more noticeable than the female flowers and form a catkin, an elongated, slim cluster of petal-less flowers which are full of pollen. The pollen is released into the wind after which the male catkin falls off the tree.



Male flowers, or catkins, of white oak. Photo by: John Hayden, Native Plant Society Botany Chair.

You may be familiar with this stage of the process if you have a mature oak near you. High pollen counts, allergies and dropped catkins are the evidence this male oak flowers have been about their business.

The female flowers occur near the tips of branches in groups of 3 or 4 on short spikes from the base of newly developing leaves. The male pollen that happens to land on a female flower results in fertilization and there an acorn will grow.

White oak acorns mature in a single season as opposed to oaks in the red oak group which mature the following season.

White oaks take approximately 50 years to reach sexual maturity and may produce acorns for the next 100 to 150 years after that. Acorn production is somewhat unpredictable as this tree's strategy is to overwhelm its forest friends (squirrels and such) every few years with a bumper crop so large that they can't all be eaten, and some will be left to germinate.

While I am not a fan of the acorn as a source of food for myself, I am a fan of the tree and I applaud the Virginia Native Plant Society for stepping out on a limb with this designation. White oak is a fantastic tree for many uses. Once fully grown, there is little that will compare with the stately oak in form and function and it even has a neat flower.

For more information on this wildflower and the Virginia Native Plant Society, go to: <http://vnps.org>.

Adam Downing is the Forestry and Natural Resources Extension Agent for Virginia's Northern District; adowning@vt.edu; 540/948-6881.