

# Forest Health

## Native But Naughty

by Diana Olszowy and Jody Thompson



You may have noticed that we often discuss how to identify and control non-native, invasive exotic plant species in this forest health section. Though these “exotics” possess the potential to create havoc in our natural systems, we also have a handful of “native” plants that have the capability to cause quite a few problems themselves. While these select native plants don’t usually approach the severity of the problem caused by the many exotic plants, certain management practices and levels of disturbance can assist them in becoming a problem. This article will highlight three of the more common “natives” that have become masterful in adapting to different sites. Even though these species are from different taxonomic families, they all share one specific characteristic – they are all heavy seed producers. Whether the seed is transported by wind, water, or animal, these species have become very efficient in increasing their numbers in order to occupy a given site.

### Red Maple:

Known as one of the most beautiful trees for fall color, red maple is also one of the most aggressive colonizers. It can easily adapt to a variety of sites and soil conditions. Like the rest of the maples, it is shade tolerant, which allows it to survive and actually thrive in the forest understory waiting

for its chance in the sun. Once the opportunity presents itself, red maple can grow very quickly and can produce copious amounts of viable seed in less than 12 years. It can often out-compete oaks, hickory, and other hardwood species on many sites. It grows in the understory and can shade out newly established seedlings of oaks and other species. If it obtains dominance in the stand, it can live so long that most other species growing

in the understory will give up and die.

Red maple isn’t usually seen as a pest in the urban landscape, but its popularity in these areas has led to its overuse in the landscape. This overuse results in red maple being present and important in urban areas and the urban rural interface; it is also a concern in woodlands. According to 2008 Kentucky Forest Inventory and Analysis data, red

maple is now more numerous in population (more individual trees) than all oak species combined. (See the Kentucky Forest Inventory and Analysis Update article, *Kentucky Woodlands Magazine*, volume 5, issue 3).

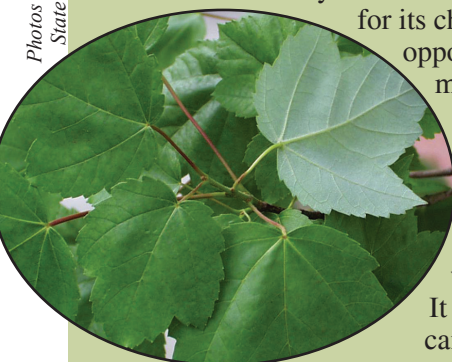
**Management:** As a result of red maple's abundance and its negative impact on regeneration of other native species, considerable time and effort is spent to reduce its numbers in the woods. This reduction is typically accomplished through forest stand improvement work. This work often focuses on treating individual red maple trees growing in the understory of the woodlands with herbicides before or directly after a timber harvest. This treatment does not eliminate red maple but reduces its numbers to allow room for more preferable species to regenerate. Because red maple is so abundant and can take over a stand, it is labeled as an invasive tree in many parts of Kentucky.

### Eastern Redcedar:

Although eastern redcedar can be found in every Kentucky county, it is most abundant in limestone soils. It is one of the chief trees to invade worn-out fields and overgrazed, eroded slopes. Redcedar is classified as a pioneer species; its primary role is to occupy a site in order to build up the soil and hold moisture to the extent that other trees can later come in and survive. In other words, redcedar “stabilizes” the site in order to make it better for the next generation of trees – usually hardwoods. As the hardwoods grow, they will eventually overshadow the redcedar, and because redcedar is shade intolerant, the species will fade from the site

over a period of years. This transition period from redcedar dominated to hardwood dominated can take many years, often decades, and if the redcedar has a good hold on the site, this time period can be extended even to 100+ years.

Depending upon where you live in Kentucky, landowners can have a negative view of eastern redcedar, perceiv-



*Red maple leaves. Woodland owners should be familiar with this tree because it is very abundant.*



*Eastern redcedar produces a berry that birds enjoy as well as beautiful wood. In many parts of the state, it is one of the first trees to invade abandoned agricultural land.*



ing it as an invasive weed species, which it certainly can be if given an opportunity. Redcedar produces a berry that birds relish, and the berry serves as the main avenue of dissemination. In several states, redcedar is a significant fire threat and is listed as a noxious weed. States such as Oklahoma and Texas have declared all-out war on the species, and Kansas and Nebraska have labeled redcedar as a noxious weed due to its ability to occupy prime pasture or rangeland. Eastern redcedar is marketable, and markets in Kentucky have historically existed and remain viable in the Commonwealth.

**Management:** The majority of the management of redcedar stands is devoted to encouraging the eventual change to hardwoods. This transition often occurs through using a commercially viable harvest to remove merchantable eastern redcedar from the stands and leaving the young developing hardwood trees. Because of this dual nature – a native merchantable species that is also invasive – eastern redcedar occupies a unique place in the discussion of invasive species. You can label eastern redcedar as something to get rid of or something to manage, and you would be correct either way.

### Wild Grape:

Kentucky is host to many native varieties of wild grapes.

Though these grapes provide excellent wildlife food, the vines can greatly damage the trees on which they grow. In contrast to some other native vines that cling to the trunk of the tree, such as Virginia creeper, the tendrils of grapes twist around in the branches, and the grape leaves cover the tops of the trees. The resulting shading of the tree's leaves curtails the growth of the tree, and the extra weight of the vines in the crown can make the trees susceptible to wind or ice storm damage. These situations typically develop where there is ample light for young trees and grape vines

to begin growing together, which typically occurs after a timber harvest opens gaps in the woods or along edges of woods. Wild grape does not actually climb the host tree; it usually grows up with the tree as the tree grows taller, so it is not uncommon for the tree and the vine to be close to the same age. When wild grape is present in high numbers in a woodland with productive soils, the grape can actually inhibit the development of regenerating trees, sometimes creating areas of bent, deformed, and dying trees. If not ruining trees initially, wild grape can often be found in

growing and maturing trees, such as black cherry and black walnut, that have relatively thin crowns, leading to damage to these potentially valuable species.

**Management:** To manage this situation of, on one hand, wild grape being a viable and valuable wild-life food, and on the other hand, being a problem for the development of trees, foresters and wildlife biologists recommend leaving grapevines in the woods when they are in low numbers or on less productive sites. Both generally agree that controlling grapevines is warranted on sites where wild grape's numbers and the soils indicate it will be a problem. Still, in such cases, not all the grapevines are controlled; some are left for wildlife. Control is generally accomplished by cutting the vines at least four years ahead of a timber harvest and allowing the vines to resprout and die in the shade. Alternatively, an herbicide can be used, but it must be used on treated vines at or near the time of a harvest. Waiting to kill vines after a harvest is extremely difficult and time consuming.

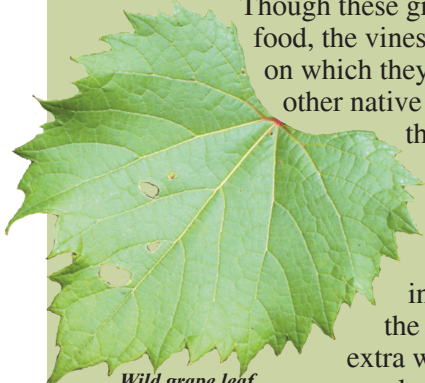
Though the native plants listed in this article can become overly aggressive, they do not compare to the many exotic, invasive plants plaguing Kentucky's landscapes. Red maple, for instance, is more often a pest in a woodland site that is being managed for timber production. Redcedar, while serving in its ecological role, is perceived as a pest when its function conflicts with a different land-use objective. The invasiveness of wild grape is influenced by the management activities you have initiated in your own woods.

In summary, please realize that many of our native plant species have the ability to become overly aggressive in the right growing conditions. Understanding and utilizing the mechanisms that Mother Nature has put in place to keep these plants in check will allow you to continue in your management endeavors without shooting yourself in the foot.

Photo courtesy: Kentucky Division of Forestry



Wild grape is an important wildlife food, but the vines can be very damaging to timber trees.



Wild grape leaf.

Photo courtesy: Theodore Webster, USDA Agricultural Research Service, Bugwood.org

#### About the Authors:

**Diana Olszowy** is Stewardship and Education Branch Manager with the Kentucky Division of Forestry. She is also an editor of the Kentucky Woodlands Magazine.

**Jody Thompson** is the Forest Health Specialist with the Kentucky Division of Forestry. His responsibilities include monitoring, identification and education for insects, diseases and invasive exotic plants in Kentucky's woodlands.

Kentucky Division of Forestry, 627 Comanche Trail, Frankfort, KY 40601; Phone: 502.564.4496; Fax: 502.564.6553; E-mails: [diana.olszowy@ky.gov](mailto:diana.olszowy@ky.gov) and [jody.thompson@ky.gov](mailto:jody.thompson@ky.gov)