

# Kentucky Champion Tree Program

## A Giant in the Shade – Eastern Hemlock *by Diana Olszowy*

For those who frequent the forests of eastern and southern Kentucky, these iconic species are often the first tree species that comes to mind. Eastern hemlock is commonly found in the Appalachian regions of North America from Nova Scotia south to northern Georgia and Alabama and west to Minnesota. In Kentucky, hemlocks thrive in areas where there is drainage of cool, moist air – on moist rocky ridges, valleys and ravines, hillsides and lakeshores. They prefer growing in partial shade and don't have any problem growing in full shade conditions. Hemlocks are unlike any other species; they have the ability to create their own microclimates. The area beneath their canopies is cooler and moister because of the dense, multi-layered growth habit that has the ability to produce year-round shade, which limits the amount of sunlight that can reach the forest floor.

Kentucky's reigning champion eastern hemlock is located in Letcher County, where it stands 145 feet tall and is more than 13.5 feet in circumference. This magnificent specimen has a nearly 100-foot spread which provides critical winter habitat for many animals, amphibians, birds and fish such as trout. Eastern hemlock is usually considered a medium to large tree that averages 70 feet in height.

Two-sided needles grow along the stem, usually flattened and blunt; two silvery stripes less than an inch long are located on the underside of the needle. Hemlock cones are small, less than a half-inch long, wind pollinated and usually mature in August/September. Hemlocks serve as an important food source for animals such as deer, rabbits, sapsuckers,

squirrels and voles. The needles, twigs, bark, sap and seeds are all edible depending upon the animal's tastes. Historically, the hemlock was used only for pulpwood or as a source of tannin for tanning leather; now lumber is manufactured from hemlock for cheap construction purposes. The Native Americans used the moist inner bark to make a poultice for wounds and sores. Even today hemlock oil, distilled from the needles and twigs, is used in liniments.

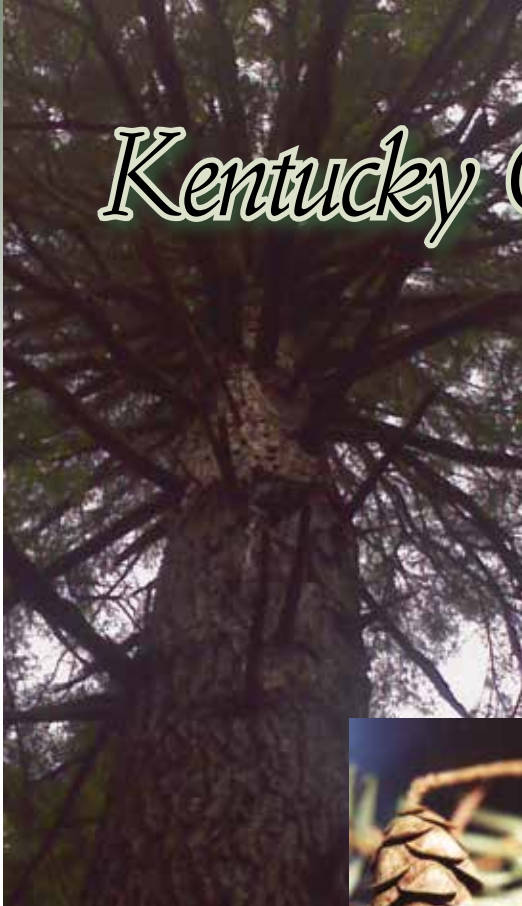
The hemlock's biggest threat is the hemlock woolly adelgid, (HWA) an insect that comes from Asia. HWA was first found in Kentucky in 2005 and has expanded to 30 eastern and southeastern counties. This magazine has discussed the infestation of HWA on numerous occasions, the most recent article in KWM Volume 7, Issue 2. Our reigning champ shows battle scars from its recent bout with HWA, but thankfully it was treated before it was lost and now it can continue to propagate the next generation.

*Healthy hemlock needles are on the left. Hemlock needles in the image on the right are being attacked by the tiny but destructive hemlock woolly adelgid. Effective treatments are available for the hemlock woolly adelgid. For more information ask your forester or county extension agent.*

### About the Author:

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*Above: Kentucky State Champion eastern hemlock in Letcher County. Right: Hemlock needles and cones are small but the importance of hemlock to wildlife is really big.*

*Hemlock photo courtesy: Kentucky Division of Forestry  
Pine cones photo courtesy: Bill Cook, Michigan State University, Bugwood.org*



*Photo courtesy: [www.bio.brandeis.edu](http://www.bio.brandeis.edu)*



*Photo courtesy: Michael Montgomery, USDA Forest Service, Bugwood.org*