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Botanical Focus: A series of articles on the flora of the Cooks Creek Watershed

Kentucky Coffeetree (*Gymnocladus dioicus*)

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As the name suggests, the Kentucky Coffeetree is generally found in an area of the United States centered around the state of Kentucky. Its seeds were roasted and used by pioneers as a substitute for coffee. Although Pennsylvania is outside its normal range, there are a few scattered small populations in the Commonwealth. One of these happens to be in our Watershed. This small stand is presided over by a majestic specimen whose trunk measures 10 feet 8 inches in circumference.



The Kentucky Coffeetree is a unique tree. The female bears large woody pods and the male and female trees have leaves of a pink-bronze color that emerge in the late spring. The tree adapts to many types of soils and has virtually no insect or disease problems. The tree normally grows up to 60 to 75 feet in height although in some rare instances, specimens have exceeded 90 feet. The Kentucky Coffeetree belongs to the pea or legume family (*Fabaceae*) but unlike most members of the family, the Kentucky Coffeetree cannot convert gaseous nitrogen into a usable form.

Native Americans used pulp from the tree's wood to treat insanity and a tea made from the leaves and pulp was used as a laxative. As mentioned before, the seeds were used as a coffee substitute but they had to be roasted. The seeds and pods are poisonous, containing the alkaloid cystisine. The roasting process, however, neutralizes the cystisine. Cattle have been known to die after drinking water that had contained seeds and leaves from the tree. And Native Americans would sometimes "catch" fish by polluting a pool of water with the seed pods of the tree and collecting the stunned fish that floated to the surface. Because of this dietary problem, it is not recommended that grazing animals be allowed to pasture near any of the female Kentucky Coffeetrees.

The tree's scientific name, *Gymnocladus dioicus*, can be simply translated as "naked branch". After the leaves drop in late fall, there are virtually no small twigs on the tree and large coarse branches are all that remain.

Wood from the tree is strong and heavy and can be used in general construction as well as for fine woodworking and cabinetry. It can be made into timbers or fence posts as well. The wood resists rotting and fence posts made from this tree have been known to last over fifty years.

There are a few cultivars that are available commercially. They are primarily male trees which bear no seed pods and are therefore less "messy" for the urban and suburban environments. The tree is relatively rare since the seeds have to have their seed coat broken by mechanical or chemical means

before germination can occur. In prehistoric times, it is thought, that mastodons and mammoths were able to digest the pods and the grinding of the animals' massive teeth allowed the seeds to be able to germinate after passing through the digestive tract. In modern times, if artificial methods are not employed, it may take over two years for the pod to deteriorate enough to release the seed. It is difficult to transplant the tree because it has an extremely long carrot-like taproot which if damaged, causes the tree to die. Most copses of these trees today have sprung up from the subsurface roots of other coffeetrees.

If you happen to have one of these outstanding trees on your property, feel yourself fortunate. Protect it and enjoy it!