

# Black Locust:

An invasive tree in our natural areas



*By Russell Brunner, Superintendent of Land Management*

The District's restoration staff is always busy fighting back against invasive species throughout our preserves. The majority of these invasive plants are herbaceous species (what we call "weeds") and include Garlic Mustard, Sweet Clover, Wild Parsnip, Red Clover, and Bird's Foot Trefoil. Two other major invasives are Bush Honeysuckle and European Buckthorn, both aggressive woody shrubs that primarily grow in the understory of our woodlands and along trail edges next to woodlands. There are also a couple of tree species that are invasive in this area, one is the Siberian Elm that was planted on purpose throughout the United States and can be problematic in disturbed woodlands and old fields. The Nardi Equine Prairie Preserve had big populations of Siberian Elm in the south end of the preserve, but we have removed almost all of these trees and have this species under control. A larger management problem for our natural areas is another tree species, the Black Locust.

Black Locust, *Robinia pseudoacacia*, is a tree native to the southeastern United States, it was primarily found in Appalachia before being introduced to other regions of the Midwest including northern Illinois primarily as a landscape tree. The tree is a legume, producing showy and very fragrant white pea like flowers for about a two week period in the late spring. The flowers are

primarily pollinated by bumblebees, but also visited by honeybees, butterflies, moths, and the Ruby-throated Hummingbirds. The white flowers arranged in racemes, or flower cluster, are replaced by 2-4" dark brown seedpods in the summer. Aside from the flowers and seed pods, another good identifying characteristic of this species are the stout thorns (about ½" long) arranged in pairs along the branches and twigs. Like many other legumes, the leaves are compound pinnate meaning one leaf is made of many smaller oblong leaflets, 7 - 19 leaflets for this species.

Why is Black Locust a problem? Black Locust loves sunshine and has an amazing ability to spread via root runners to produce large clonal colonies, especially as a result of cutting a mature tree. If you cut one down, you may soon find you now have 20 or more. If you remove 100s of these trees, you could end up with 1000s of small sprouts! This species can become a big problem in prairies, oak savannas, and open oak woodlands where the dense clonal stands will suffocate all the native vegetation underneath them. This species is a management problem at three of the District's preserves. The trees have spread from fence lines and roadsides out into prairie plantings very aggressively over the last 10 years.



*Pictured left: A good identifying characteristic of this species are the stout thorns (about ½" long) arranged in pairs along the branches and twigs. Above: The showy pea like flowers of the Black Locust in the spring. Right: Black Locust clonal resprouts following the cutting of mature Black Locust trees. Quite a mess!*



The good news is that Black Locust can be controlled. However, it does require herbicide. Cutting alone actually makes the problem much worse because of the root sprouting as mentioned earlier. Prescribed burning is effective at top killing smaller locust trees in our prairies and woodlands but they will resprout from the roots. The best management strategy is to use backpack sprayers and apply a basal bark herbicide to the bottoms of the stems during the growing season and let the tree die before removing it. This is a labor intensive method but is effective in problem areas where 100s or 1000s of locust trees are present.

The District's worst infestation of this thorny tree is at the Ripplinger-Gouker Prairie Preserve. Black Locusts were growing all through the oak savanna area, old fields, and along Route 2 when the District acquired the property. They later spread out into our new prairie plantings. With thorough and repeated basal bark treatments and foliar spraying of resprouts following prescribed burnings, we have reduced the Black Locust by about 90%. We should be able to further reduce this invasive with one more round of control next year. It is difficult to ever fully eliminate an invasive species from our preserves as they are present off site along highways and on adjacent private properties. This is the case

with Black Locust; it has become very common up and down the Rock River corridor and in old fields throughout our area.

As with all of the invasive species in northern Illinois, without an aggressive long-term approach from all landowners to control Black Locust on each of our properties we can expect it will always be around and is here to stay. As a Forest Preserve District committed to restoring and managing our public lands for the diversity of native plants, we will continue to do our best to control Black Locust and other invasive weeds on all of the District's preserves. Our preserves are home to many plants and animals that are likely found nowhere else within the Byron area and fighting invasive species is key to protecting our rare native plant communities and all of the wildlife that depend on them.

Any questions about invasive species or management at our preserves? Interested in helping control brush, pulling weeds, or in collecting native seed? Feel free to contact me at Russell@byronforestpreserve.com or 815.234.8535 ext 219.