



### Black Locust

*Robinia pseudoacacia* L.

Pea family (Fabaceae)

#### NATIVE RANGE

Southeastern United States; on the lower slopes of the Appalachian Mountains, with separate outliers north along the slopes and forest edges of southern Illinois, Indiana, and Missouri

#### DESCRIPTION

Black locust is a fast growing tree that can reach 40 to 100 feet in height at maturity. While the bark of young saplings is smooth and green, mature trees can be distinguished by bark that is dark brown and deeply furrowed, with flat-topped ridges. Seedlings and sprouts grow rapidly and are easily identified by long paired thorns. Leaves of black locust alternate along stems and are composed of seven to twenty one smaller leaf segments called leaflets. Leaflets are oval to rounded in outline, dark green above and pale beneath. Fragrant white flowers appear in drooping clusters in May and June and have a yellow blotch on the uppermost petal. Fruit pods are smooth, 2 to 4 inches long, and contain 4 to 8 seeds. Two other locusts native to the Appalachians, *Robinia viscosa* (with pink flowers), and *Robinia hispida* (with rose-purple flowers), are used in cultivation and may share black locust's invasive tendencies.



#### ECOLOGICAL THREAT

Black locust poses a serious threat to native vegetation in dry and sand prairies, oak savannas and upland forest edges, outside of its historic North American range. Native North American prairie and savanna ecosystems have been greatly reduced in size and are now represented by endangered ecosystem fragments. Once introduced to an area, black locust expands readily into areas where their shade reduces competition from other (sun-loving) plants. Dense clones of locust create shaded islands with little ground vegetation. Lack of ground fuel limits the use of fire in natural disturbance regimes. The large, fragrant blossoms of black locust compete with native plants for pollinating bees.



#### DISTRIBUTION IN THE UNITED STATES

Black locust has been planted in many temperate climates and is naturalized throughout the United States, within and outside of its historical range, and in some parts of Europe.

#### HABITAT IN THE UNITED STATES

Black locust is an early successional plant, preferring full sun, well drained soils and little competition. It is commonly found in disturbed areas such as old fields, degraded woods, and roadsides. Due to its rapid growth, black locust has been promoted by state and federal agencies and nurseries, and is sometimes planted in or near prairies, oak savannas and native woodland edges.

#### BACKGROUND

Black locust has been planted extensively for its nitrogen fixing abilities, as a source of nectar for honeybees, and for fenceposts and hardwood lumber. The clonal pattern of growth and connected roots are promoted for erosion control. It is also used for mine soil reclamation. Black locust is susceptible to some damage from two native insects, the locust borer (*Megacyllene robiniae*) and the locust leafminer (*Odontota dorsalis*).

## BIOLOGY & SPREAD

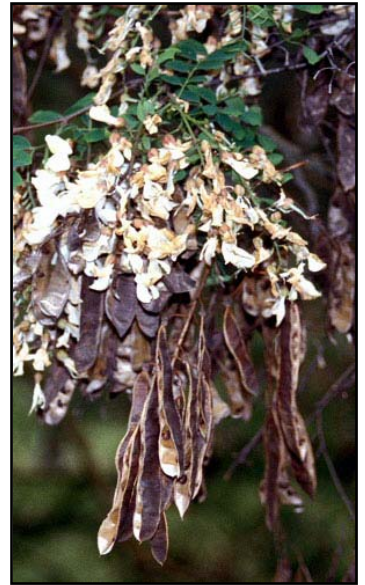
Black locust reproduces vigorously by root suckering and stump sprouting to form groves (or clones) of trees interconnected by a common fibrous root system. Physical damage to roots and stems increases suckering and sprouting, making control difficult. Black locust clones easily spread in quality and restorable natural areas. Although black locust produces abundant seeds, they seldom germinate.

## MANAGEMENT OPTIONS

Mowing and burning are only effective in reducing the further spread of young shoots from a clone or parent tree. To kill a clone, cutting alone is ineffective. Herbicides applied to the stems or cut stumps spread into the root system and provide better control. From mid-June to August hand sprayer application of 6.25% glyphosate solution (15:1 water:glyphosate) to stumps cut near the ground has been used by the Minnesota Department of Natural Resources, Region V State Parks Resource Management Office. Resprouting and suckering from dense clones may require follow up treatment after a few years\*.

\*Because plants that appear to have been killed can resprout even several years after treatment with herbicide, annual monitoring should be conducted and follow-up treatments made as needed.

Throughout the year a 25% triclopyr solution in basal oil (3:1 oil:triclopyr) applied immediately to cut stumps using backpack sprayers has been used with success by the Scientific and Natural Areas Program in Minnesota. Thoroughly wet the cut stump and bark below the cut, down to the root collar, but avoid runoff. Any runoff will kill surrounding vegetation, especially if treated in the winter before snow melt.



**USE PESTICIDES WISELY:** Always read the entire pesticide label carefully, follow all mixing and application instructions and wear all recommended personal protective gear and clothing. Contact your state department of agriculture for any additional pesticide use requirements, restrictions or recommendations.

**NOTICE:** mention of pesticide products on this page does not constitute endorsement of any material.

## SUGGESTED ALTERNATIVE PLANTS

For erosion control, soil enrichment, and nectar sources, plant native grasses and other native herbs, shrubs and trees that are appropriate for your soil and moisture conditions. If tree plantings will affect nearby natural communities, plant oak tree species native to your area for timber or shade. Contact the native plant society in your state or a state forester or resource manager for recommendations on appropriate, non-invasive native tree and shrub species for your site.

## OTHER LINKS

- <http://www.invasive.org/search/action.cfm?q=Robinia%20pseudoacacia>
- <http://www.lib.uconn.edu/webapps/ipane/browsing.cfm?descriptionid=102>

## AUTHOR

Susan Wieseler, Minnesota Department of Natural Resources, Rochester, MN

## EDITORS

Jil M. Swearingen, National Park Service, Washington, DC  
Larry Morse, The Nature Conservancy, Arlington, VA

## PHOTOGRAPHS

John M. Randall, The Nature Conservancy, Davis, CA.

## REFERENCES

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