



Paper Mulberry

Broussonetia papyrifera (L.) L'Her. ex Vent.

Mulberry family (Moraceae)

NATIVE RANGE

Japan and Taiwan

DESCRIPTION

Paper mulberry is a deciduous tree with milky sap that grows to a maximum height of about 45 ft. (15 m.). The twigs of paper mulberry are hairy reddish brown, the bark is tan and smooth to moderately furrowed, the wood is soft and brittle, and it has conical buds. The leaves are densely gray-pubescent, often lobed or mitten-shaped, and are alternate, opposite or whorled along the stem. The leaf margin is sharply toothed, the leaf base is heart-shaped to rounded with pointed tips, and the upper leaf surface is rough feeling. Separate male and female flowers appear in the spring. Male flower clusters are elongate, pendulous, 2 ½ to 3 in. (6-8 cm) long, and composed of many individual flowers. Female flowers are globular and about 1 in. (2cm) in diameter. The fruits are reddish purple to orange, ¾-1 in. (1.5-2.0 cm) in diameter, and appear in summer. Paper mulberry may be confused with the exotic white mulberry and native trees such as red mulberry, sassafras, basswood, and white poplar.



ECOLOGICAL THREAT

Paper mulberry exhibits aggressive growth and quickly invades disturbed lands, displacing native plants. It has a shallow root system that makes the trees susceptible to blow over during high winds.



DISTRIBUTION IN THE UNITED STATES

Paper-mulberry occurs in twenty eight states in the Northeast, Southeast, and Midwest, and is reported to be invasive in natural areas in the District of Columbia, Florida, Georgia, Louisiana, Maryland, North Carolina, Oklahoma, Pennsylvania, South Carolina, Tennessee, and Virginia. It is also identified as an invasive weed in over a dozen countries around the world.

HABITAT IN THE UNITED STATES

Paper mulberry thrives in open habitats such as forest and field edges, and in disturbed areas.

BACKGROUND

Paper mulberry was known from Florida as early as 1903 and was widely planted throughout the Southeast as an ornamental and shade tree around dwellings. The inner bark has been used from ancient times as a source of paper and Pacific cultures used it to make barkcloth.

BIOLOGY & SPREAD

Paper mulberry spreads both by seed and through vegetative expansion. The seeds are spread far and wide by wildlife who feed on the fruits. Paper mulberry expands locally by producing new plants from its roots.

MANAGEMENT OPTIONS

With the exception of one systemic herbicide used effectively by plant control contractors in Florida, little information is available on control of this plant. Manual and mechanical methods either alone or in combination with herbicide treatment are also possible.

Biological

Biological control is not currently available for this plant.

Chemical

Basal bark, cut-stem, hack-and-squirt, or injection methods of herbicide application are recommended because these methods, if used properly, focus applications to target species, minimize the overall amount of herbicide applied, and reduce environmental impacts. Basal bark application of the systemic herbicide Garlon® 4 (triclopyr ester @ 61.6% a.i.) with a 15-20% mix in horticultural oil will achieve effective control. Garlon® 3A (triclopyr amine @ 44.4% a.i.) may be used with a 50% mix in water for cut stump applications. Herbicide can also be applied using a hatchet* to make angled cuts into the trunk, into which concentrated herbicide is squirted from a hand-held spray bottle. For this method, use a 10% mixture of Garlon® 4 in horticultural oil, or a 15% rate for larger trees. Triclopyr products such as Brush-B-Gon® are available at many garden and hardware stores.

*A "hypo-hatchet," a hatchet equipped with a mechanism that automatically injects pre-measured amounts of herbicide into cuts upon impact, may also be used.

Manual

Pull seedlings by hand when the ground is moist.

Mechanical

Cut young plants to the ground, repeating as necessary to control regrowth from sprouts.

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

A wide variety of native trees are available as substitutes for paper mulberry, including basswood (*Tilia heterophylla*), sassafras (*Sassafras albidum*), red maple (*Acer rubrum*), hackberry (*Celtis occidentalis*), and black gum (*Nyssa sylvatica*), to name just a few. Check with your local native plant society for species that are suitable for your area.

OTHER LINKS

- <http://www.invasive.org/search/action.cfm?q=Broussonetia%20papyrifera>
- http://www.hear.org/starr/hiplants/images/thumbnails/html/broussonetia_papyrifera.htm

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