

Wisteria (*Wisteria*, two species and hybrid)

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Managed Forests



Fig. 1. A flowering wisteria.

Fig. 2. Japanese wisteria hybrid foliage.

Fig. 3. Japanese wisteria pubescent fruit.

Introduction

Problems Created

There are two species of wisteria escaped in the eastern United States: Chinese wisteria [*Wisteria sinensis* (Sims) DC.] and Japanese wisteria [*Wisteria floribunda* (Willd.) DC.]. According to a recent DNA study, these two species have produced many fertile hybrids (*Wisteria x formosa* Rehd.) throughout the southeastern United States. Therefore, differentiation between the three can be difficult. Both species are perennial, deciduous vines native to Asia and introduced in the early 1800's. Chinese wisteria is native to China, while Japanese wisteria is native to Japan. Both species, including the hybrids, have been extensively used as ornamentals. For example, a Chinese wisteria in Sierra Madre, California, planted in 1892, is reportedly the largest blossoming plant in cultivation and produces around 1.5 million inflorescences each year. Once established, wisteria can be difficult to eradicate and can persist for years strangling native trees and shrubs trying to colonize the site. They can also kill, or disfigure, desirable trees in the landscape. In addition, Wisteria leaves, fruit, and seed are toxic. Since characteristics and controls are similar, the same information is provided in IPAMS for Chinese, Japanese and hybrid wisteria.

Regulations

Wisteria species and hybrids are not regulated in the United States or the MidSouth. They are widely cultivated in the MidSouth as ornamentals.

Description

Vegetative Growth

Chinese and Japanese wisterias have some distinguishing vegetative differences including stems and leaves. Chinese wisteria twines counterclockwise while Japanese wisteria twines clockwise. Leaflets on Chinese wisteria range from 7 to 13, usually 11, while leaflets on Japanese wisteria range from 13 to 19. However with some overlap in leaflet characteristics and the presence of hybrids (*Wisteria x formosa* Rehd.), positive identification can be difficult. In general, all wisterias have pinnately-compound leaves that are alternate in arrangement. Leaflets tend to elliptic to ovate in shape and 1" to 4" in length. Unlike American wisteria, which reaches 15' to 25', Chinese and Japanese wisterias are high climbing vines reaching upwards of 70' to 80'. The record Chinese wisteria in Sierra Madre, California was recorded with a stem length of over 450'. Chinese and Japanese wisterias are usually only limited by the structure on which they grow. Wisteria stems (vines) can wrap around structures very tight, slowly killing trees. Stems are relatively smooth and have a light brown or tan coloration. Both vertical and lateral stems are produced. Lateral stems trail across the ground, rooting along its length, and usually tightening with age. Removal of either type of stem can be difficult.

Flowering

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Description, Cont.

Dispersal

Wisteria is dispersed vegetatively by stem growth or sexually by seed. However, fruit are poisonous and most likely not dispersed frequently by wildlife. Their use for ornament has most likely led to invasions in most areas of the U.S.

Spread by

Wisteria is spread primarily by human activity, such as landscape planting, and vegetative growth of vines.

Habitat

Wisterias can be a problem in fence rows, forest, and landscapes. It can form dense thickets, replacing the surrounding native vegetation. Although these thickets may provide habitat for certain wildlife, they are a difficult barrier for human and animal activity.

Distribution

Chinese and Japanese wisterias are reportedly widespread in the eastern United States, but the presence of fertile hybrids may compromise current species distributions. American wisteria has a similar distribution in the United States ranging from Massachusetts to Michigan south to Florida and Texas. All are cultivated, especially Chinese and Japanese wisterias and their hybrids. Thus, they are often found in the south around old home sites.

Wisterias are widespread in the MidSouth. Introduced species and hybrids are typically associated with old home sites, but can be problematic in newer landscapes if not maintained properly. American wisteria is generally not as aggressive and occurs in and around wetlands.

Control Methods

Biological Control

No biological controls are currently being utilized for wisteria control.

Chemical Control

More research is needed on wisteria control, since there are no label recommendations.

Mechanical Control

Mechanical controls can be used for wisteria control, but tend to be expensive and labor intensive. Lateral stems (vines) are produced at the base of climbing stems and can run a good distance from the original plant. Climbing vines can twine tightly around trees and shrubs making removal difficult. Young shoots can be snapped to prune, but older vines are difficult to cut. In addition, seed may remain in the soil and germinate long after plants are removed. Thus, removal prior to seed production is recommended.

Physical Control

No physical controls are widely utilized for wisteria control. Wisteria grows in both shade and full sun habitats.

References

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