



## TREES AND SHRUBS

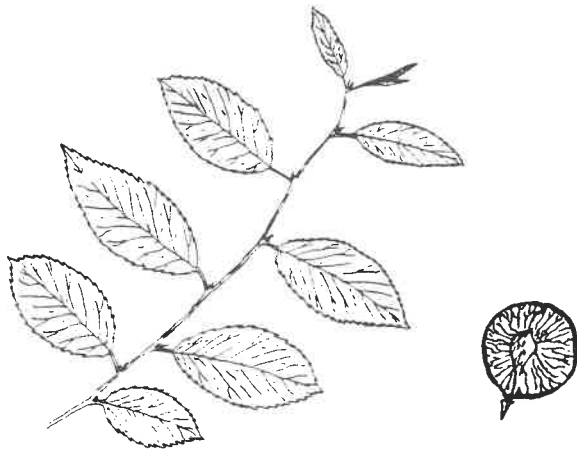
Introduced Prairie Forest Species  
Urban Forest Species

# SIBERIAN ELM

(*Ulmus pumila*)

## Description

*Ulmus* is the ancient Latin name for elm. *Pumila* is Latin for dwarf in reference to the small leaves. This species is incorrectly called the **Chinese elm**. The true Chinese elm (*U. parviflora*) is a much better tree, but it is not hardy in South Dakota. The Chinese elm has a mottled bark that peels off in irregular patches. The wood is also much stronger.



before the leaves, and occur in short-stalked clusters. Fruits are 1/2 inch (1.27 cm) long circular *samaras* that fall as the leaves open (a common seed dispersal of flood plain species, see willow). The silver-gray twigs zigzag with a *lateral bud* at each turn. The bark is grayish-black and furrowed.

## Distribution

Siberian elm is an Asian species, native to eastern Siberia, northern China, Manchuria and Korea. In its native environment, Siberian elm is typically found growing along streams, not much different from the habitat in which elms are found in this country. The tree was introduced into South Dakota in 1905.

Siberian elm is a member of Ulmaceae, the elm family, along with American elm (*Ulmus americana*) and hackberry (*Celtis occidentalis*). Siberian elm leaves are *deciduous, alternate, simple*, 3/4 to 3 inches (2 to 8 cm) long, oval, with toothed *margins*. The flowers appear

Trees from the Harbin region of Manchuria are the ones best adapted to South Dakota, since the two regions share a similar climate, hot summers and cold winters.

## Natural History

Siberian elm is resistant to Dutch elm disease, but it has a number of limitations, particularly when used as a windbreak species. In South Dakota, many of the trees are infected with a canker disease called *Botryodiplodia hypodermia*. This disease can cause branches to die and eventually can kill the tree. Siberian elm is sensitive to herbicides. They are often stunted by herbicide applications and occasionally killed.

**Life Span:** In its native environment, Siberian elms can live to be 100 to 150 years old, not a very long-lived species. In South Dakota, the average life span probably drops to 50 or 60 years.

**Size:** In Asia, there is a tremendous variation in height growth. In some areas of Turkestan, the trees become over 70 feet (21 m) tall, while the other extreme, a shrub form of this species, occurs in

Mongolia. The national champion in Detroit, Michigan is 226 inches (574 cm) in circumference, 146 feet (45 m) tall and has a crown spread of 112 feet (34 m)! Our state champion in Pierre is 114 inches (290 cm) in circumference, 62 feet (19 m) tall and has a crown spread of 48 feet (15 m).

## Significance

The primary use of Siberian elm in South Dakota is as a windbreak species. It is very fast growing, somewhat drought tolerant and can live in *alkaline soils*. Unfortunately, the branches are very brittle and the tree develops a very open appearance. In areas where better trees can be grown, this tree is not often planted. Two commonly planted *cultivars* are Chinkota and Dropmore. The Dropmore *cultivar* is from seeds collected by F. L. Skinner of Dropmore, Manitoba. He collected the seed in Harbin. The Chinkota *cultivar* was developed at South Dakota State University from the 'Dropmore'. It becomes dormant a little sooner in the fall and also has a lower branching habit.

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