

TREES AND SHRUBS

Flood Plains Prairie Forest Species
Urban Forest Species
Windbreak Forest Species

GREEN ASH

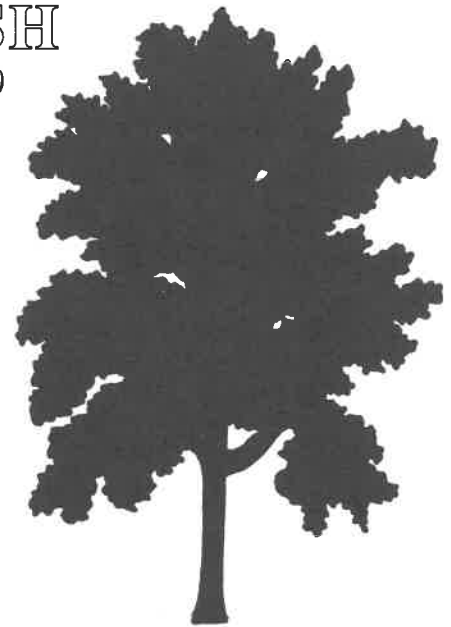
(*Fraxinus pennsylvanica*)

Description

Fraxinus is the ancient Latin name for "ash." *Pennsylvanica* is the Latinized name of Pennsylvania. When European botanists were first naming North American trees, they gave some names in reference to where the specimen was collected. Other common names for green ash include red ash, swamp ash, and water ash. The Lakota know green ash as *pséhtin can*, the Omaha as *tashnanga-hi*, the Winnebago as *rak* and the Pawnee as *kiditake*.



Green ash belongs to the Oleaceae, the olive family, along with lilac (*Syringa vulgaris*). Its leaves are *deciduous*, *opposite*, *pinnately compound* with 7 to 9 *leaflets*. *Leaflets* are 3 to 4 inches (8 to 10 cm) long, *ovate* and have a smooth *margin*. Ash flowers are separated into male and female flowers, both are very



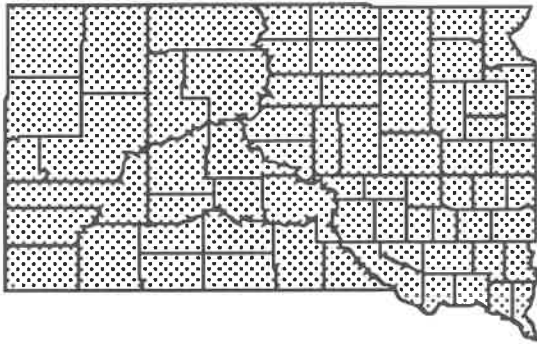
small and appear in the spring before the leaves. Fruits are 1 to 2 inches (2.54 to 5 cm) long, narrow *samara*. Twigs are slender, gray to greenish brown, with a pointed bud at the tip. The bark is ashy-gray, divided into shallow furrows shaped into diamond patterns.

Distribution

Green ash is native to the central and eastern regions of the United States. It is found from Maine to eastern Montana and Minnesota to central Texas and northern Florida. Green ash is native to South Dakota, naturally occurring only along rivers and streams, and in wooded draws. It is also planted throughout the state.

Green ash grows on the bottomland soils found along rivers. It will tolerate an occasional flooding, perhaps once or twice a year, but can not survive in areas that have a permanent high water table. Green ash grows well on heavy clay, bottomland soils.

Native Distribution



Green ash is intolerant to moderately tolerant of shade competition. It generally comes into a forest after cottonwoods. However, on clay soils it is often a *pioneer species*. Green ash seeds mature in the fall. They usually are wind-dispersed within a few hundred feet of the parent tree. Some are carried far distances by water. Once green ash begins to develop, American elm begins to grow in their shade and will eventually crowd out the ash. This pattern is now beginning to change. Due to Dutch Elm disease, green ash is becoming the *climax species*. There are many areas along the Big Sioux River where the flood plain forests consist of a few large cottonwoods, several dying elms and hundreds of green ash.

Natural History

Green ash is a very tough tree. It is very drought tolerant because of its extensive root system. Trees 40 feet (12 m) tall have been found to have roots that grow outward more than 50 feet (15 m) and go down as deep as 3 or 4 feet (91 to 122 cm).

Life Span: Green ash has an average life span of 100 to 120 years.

Size: The largest green ash is in Cass County, Michigan. This tree is 242 inches (615 cm) in circumference, 131 feet (40 m) tall and has a branch spread of 121 feet (37 m). The largest green ash in South Dakota is in Sioux Falls. It is 157 inches (399 cm) in circumference, 80 feet (24 m) tall and has a crown spread of 57 feet (17 m).

Significance

While found naturally in moist flood plains, green ash adapts well to dry soils. Because of its drought tolerance and rapid growth, green ash is extensively used as a windbreak tree. Many improved green ash *cultivars*, such as Summit and Patmore, are planted as shade trees.

While green ash is firm, it is not as straight-grained as white ash (*Fraxinus americana*), so it is not an important timber species. The American Indians used green ash for bows, with the young stems made into arrow shafts. Green ash is also an important symbol and is used as part of the Sacred Pole of the Omaha Indians.

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