



## TREES AND SHRUBS

Windbreak Forest Species  
Urban Forest Species

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# RUSSIAN-OLIVE

(*Elaeagnus angustifolia*)

## Description

The fruit of the Russian-olive resembles an olive and the leaf that of the chaste-tree. *Elaeagnus* is from the Greek *elaia*, "olive," and *agnós*, the Greek name of the chaste-tree (*Vitex agnus-castus*). Russian-olive is the most commonly accepted name in the United States, though occasionally it is called oleaster. Notice that since it is not a true olive the common name is hyphenated.



The Russian-olive is a member of Elaeagnaceae, the oleaster family. Its leaves are *deciduous, alternate, simple*, 1 to 3 inches (2.54 to 7.62 cm) long, narrow and dull green, almost gray in color. The flowers occur in May and are small, white with a yellow inside and fragrant. The fruit is oval, 1/2 inch (1.27 cm) long, silvery gray, with sweet tasting flesh. The fruit matures in late summer, but may persist on the tree through the



entire winter. Young twigs are silvery and often have thorns. Bark breaks into long shredded pieces and is dark gray in color.

## Distribution

Russian-olive is native to southern Europe and to western and central Asia. This wide geographical range, which stretches from the Mediterranean Sea to northern China, encompasses many climates, some similar to South Dakota, but some much milder. Many of the early prairie plantings of Russian-olive failed because trees were brought from areas with milder climates. It was not until Mennonites brought hardy trees from

Russia that Russian-olive became established in South Dakota.

The trees adapted well to South Dakota. They tolerate the cold winters and low precipitation since they are from the Russian *steppes*, or plains, where the annual rainfall is only 12 to 14 inches. The *alkaline soils* are also similar. Russian-olive may have adapted too well. In some areas of South Dakota, Russian-olive is out-growing the native vegetation and taking over range and pasture land.

## Natural History

When it was first introduced, the Russian-olive was relatively pest free since its pests were not here, but in Asia. Also, since there were not a lot of Russian-olives planted and these plantings were spread out, very few native diseases became a problem. Now, however, with Russian-olives a common sight from South Dakota to New England, diseases have become a problem. Probably the most important is *phomopsis canker*. This fungus disease was first found in Missouri in 1963, about a hundred years after the tree was introduced into the United States. The disease kills branches and, if left unchecked, can eventually kill the entire tree. The disease is contributing to the decline of Russian-olives in windbreaks across the Great Plains.

**Life Span:** Russian-olives are not a long-lived species. In the United States average life expectancy is about 50 years, but with diseases such as *phomopsis canker* beginning to kill trees the average life span will probably decrease.

**Size:** Russian-olive is not a very large tree, rarely reaching 30 to 40 feet (9 to 12 m) tall. The climate of South Dakota must agree with it since the national

champion is near Rapid City, just east of the Black Hills speedway. This tree has a circumference of 149 inches (378 cm) and is 52 feet (16 m) tall with a crown spread of 62 feet (19 m).

## Significance

Russian-olives are primarily used as a windbreak for farms and a snowbreak along railroads and roads. The tree makes a very thick hedge that stops livestock from penetrating and reduces the severity of wind. The other use of Russian-olive in South Dakota is as an *ornamental* tree. The narrow silvery-green leaves are an attractive addition to the landscape and the tree is drought and salt tolerant. Wildlife have also found the tree to be a useful shelter and the fruit is a winter food source for turkeys and other birds. Russian-olive wood is not very valuable since the tree rarely achieves the size necessary for timber production.

## Is There A Closely Related Native Species?

One of the most important native members of the *Elaeagnaceae* family is the **silver buffaloberry** (*Shepherdia argentea*), which was known to the Lakota as *mastinca pute'can*, "rabbit lip tree." Buffaloberry is native from Minnesota to Saskatchewan and south to Nevada and Kansas. It is found throughout South Dakota. The thorny shrub sometimes can reach a height of 18 feet (5.5 m). While a state champion buffaloberry has not been identified, the national champion is 22 feet (7 m) tall. It is similar in appearance to Russian-olive, but the leaves are arranged *oppositely* rather than *alternately*. The plant is sometimes used as a windbreak or *ornamental*. The fruit is edible and was eaten fresh or dried by the American Indians.

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