

European Mountain Ash

Sorbus aucuparia L.

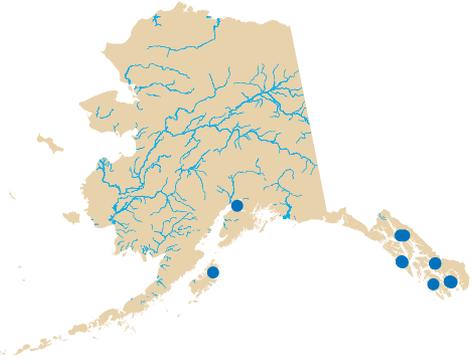
Synonyms

Pyrus aucuparia (L.) Gaertn.

Description

European mountain ash is an upright tree that grows 25 to 40 feet high with a rounded, open crown.

The bark is grayish or yellowish-green and smooth. Leaves are alternate, pinnately compound, and 5 to 8 inches long. There are 11 to 15 leaflets per leaf that are dull dark green above and paler below. Clusters of small white flowers appear in May or June and measure 3 to 5 inches across. Fruits are bright, deep orange to red, small, and fleshy, and they ripen in September and persist on the tree through winter.



XID Services photo by Richard Old

Similar Species

There are 3 native *Sorbus* species in Alaska: Sitka mountain ash (*S. sitchensis* M. Roemer), Cascade mountain ash (*S. scopulina* Greene), and Siberian mountain ash (*S. sambucifolia* (Cham. & Schlecht.) Roem.), a coastal tree, a southern Alaskan shrub, and a western Aleutian shrub, respectively. European mountain ash can be distinguished from the native species by its leaves and fruits. The leaflets are unequal and rounded at the base with more than 11 leaflets per leaf, and the fruits are borne in clusters of many (>25) individual fruits.

Ecological Impact

European mountain ash is able to integrate into coastal rainforest communities in southeast Alaska and dominate

Family: Rosaceae

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(e.g., Sitka National Historical Park). It has also been reported to invade forest communities in Wisconsin (WDNR 2003). Fruits are highly desirable to birds, suggesting the potential for alterations in abundance and composition of avian fauna (Gilman and Watson 1994). European mountain ash hybridizes with the native *S. scopulina* and *S. sitchensis* where their ranges overlap (Pojar and MacKinnon 1994).

Biology and Invasive Potential

European mountain ash is a perennial tree that grows rapidly and establishes by seeds, cuttings, or bare root propagation, but it does not spread vegetatively (GRIN 2004). Seeds are numerous and tiny, with many thousands of seeds produced per plant each year. Seeds have a strong innate dormancy that lifts gradually over a few years, and they remain viable in the soil for 5 years or more (Granström 1987). This species germinates well under experimental conditions of multiple years in moist soil (1 inch in soil, under a moss/litter layer) in central Sweden with full light and 68°F (Granström 1987). Cold-stratification is necessary (GRIN 2004). European mountain ash is suited to coarse-textured soils and not to fine soils, and it tolerates pH levels ranging from 5.5 to 7.5. It is unsuited to anaerobic, calcareous, saline, or low moisture soils. It grows in moderately fertile soil and has intermediate shade-tolerance (GRIN 2004). Seeds are spread by birds including thrushes and waxwings and small mammals (Dickinson and Campbell 1991). European mountain ash is widely planted as an ornamental in South-central and Southeast Alaska, where



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it has escaped (Welsh 1974). It has been reported to spread as a contaminant of horticultural stock (Hodkinson and Thompson 1997).

Distribution and Abundance

Originally from most of Europe, northern Africa, and western Asia, European mountain ash has naturalized in 27 northern states throughout moist cool regions of North America. It is commonly planted around communities in Southeast, Southcentral, and Interior Alaska, despite a USDA hardiness of zone 2 or less. Its native range in Europe extends from Spain north to Scandinavia and east to the Ural Mountains, and it also occurs in Iceland.

Management

Control measures for European mountain ash are largely untested. It has the ability to resprout after cutting. Frill methods—application of herbicide to exposed cambium—or felling the tree and applying herbicide to cut stumps to prevent resprouting should be effective. Use herbicides labelled for frill application only. Many natural seed predators are present in Scandinavia that likely limit its spread and establishment, but it is unknown if these or similar predators are present in North America.



US Geological Survey photo by Chris McKee

Notes

European mountain ash has frequently been planted at remote settlements in southeast Alaska and still remains at many of these sites. Birds enjoy the berries and can carry and spread them over long distances. Although rumor suggests that the berries are toxic, in Europe, where this species is called the rowan tree, the berries are commonly used in jams and jellies.