Prunus serotina



Taxon	Family / Order / Phylum
Prunus serotina Ehrh.	Rosaceae / Rosales / Plantae

COMMON NAMES (English only)

Black cherry Wild black cherry

SYNONYMS

Padus serotina (Ehrh.) Borkh. Cerasus serotina (Ehrh.) Loisel.

SHORT DESCRIPTION

This tree can reach up to 35 m in height. Leaves are entire and shiny. Flowers are white and organized in an oblong-cylindrical raceme 10-15 cm long. Fruits are blackberries, about 8 mm in diameter. Wood and fruits are used commercially.

BIOLOGY/ECOLOGY

Dispersal mechanisms

Seeds are dispersed by vertebrates such as birds, foxes and other mammals that feed upon fruits. Many seedlings are found beneath trees.

Reproduction

Flowers are pollinated by insects. Germination rates are high. Vegetative reproduction from extensive lateral roots is also common. It forms dense, highly competitive thickets.

Known predators/herbivores

Rodents, foxes and birds are efficient fruit and seed consumers. In the home range in America a lot of parasites are known.

Resistant stages (seeds, spores etc.)

Seeds in the soil can remain viable up to five years. Plants respond to cutting by resprouting.

HABITAT

Native (EUNIS code)

G: woodland, forest and other wooded land

Habitat occupied in invaded range (EUNIS code)

G1: Broadleaved deciduous woodland, G3: Coniferous woodland, G4: Mixed deciduous and coniferous woodland, G5: Lines of trees, small anthropogenic woodlands, recently felled woodland, early-stage woodland and coppice, J6: Waste deposits.

Habitat requirements

Planted as a forest and park tree, it usually occurs in managed forests and clearings. It is mostly found in pine or mixed pine and oak forests on sandy soils. The tree can invade open ground and grasslands. The tree is tolerant to air pollution.



Prunus serotina invading waste land and forests in Central Germany

Photo: Andre Künzelmann

DISTRIBUTION

Native (EUNIS code)

Eastern North America from Nova Scotia to the South West of Guatemala (Mountain ranges) in Central America.

Known Introduced Range

Temperate and continental Europe.

Trend

There is increasing invasion in forests and abandoned fields, and a clear range expansion.

MAP (European distribution)





INTRODUCTION PATHWAY

It was introduced in 1623 to Europe as an ornamental tree and used as a forest tree in the late 19th century. It was planted mainly on poor sandy soils to increase forest production. Additionally, the tree was used for restoration of mining land.

IMPACT

Ecosystem Impact

Competes for resources with native plant species, e specially during natural forest regeneration. The litter changes humus quality.

Health and Social Impact

Bark and seeds are toxic (cyanogenic glycoside).

Economic Impact

Maintaining natural forest regeneration is increasing costs for forest management.

MANAGEMENT

Prevention

Avoid planting as a forest and ornamental tree near forested areas.

Mechanical

Plants sprout fast after tree and shrub cutting. Successful regrowth can occur from any root system.

Chemical

Herbicide (Round-Up) used in combination with mechanical management can be successful.

Biological

Efficient biological methods are not available.

REFERENCES

- Mulligan G A, Munro D B (1981) The biology of Canadian weeds. 51. *Prunus virginiana* L. and *P. serotina* Ehrh. Can J Plant Science 61:977-992
- Marquis D A (1990) *Prunus serotina* Ehrh. Black cherry. In: Burns R. M., Honkala B. A. Silvics of North America. Vol. 2. Hardwoods. Agriculture Handbook 654. U.S. Department of Agriculture. Washington DC
- Starfinger U (1997) Introduction and naturalization of *Prunus serotina* in Central Europe. In: Brock J. H., Wade M., Pysek P., Green D. (eds.) Plant invasions: Studies from North America and Europe. Backhuys Publishers, Leiden, pp161-171

OTHER REFERENCES

- Auclair AN, Cottam G (1971) Dynamics of Black Cherry (*Prunus serotina* Ehrh.) in Southern Wisconsin oak forests. Ecological Monographs 41:153-177
- Starfinger U (1991) Population biology of an invading tree species *Prunus serotina*. In: Seitz A., Loeschke V. (eds.) Species conservation: a population-biological approach. Birkhäuser, Basel, pp171-184

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