

Russian-Olive*Elaeagnus angustifolia* L.

Oleaster family (Elaeagnaceae)

NATIVE RANGE

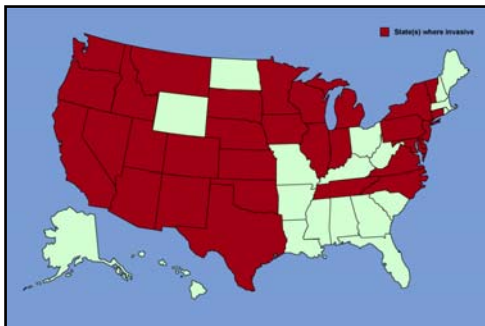
Southeastern Europe and Western Asia

DESCRIPTION

Russian-olive is a small, usually thorny shrub or small tree that can grow to 30 feet in height. Its stems, buds, and leaves have a dense covering of silvery to rusty scales. Leaves are egg or lance-shaped, smooth margined, and alternate along the stem. At three years of age, plants begin to flower and fruit. Highly aromatic, creamy yellow flowers appear in June and July and are later replaced by clusters of abundant silvery fruits.

ECOLOGICAL THREAT

Russian-olive can outcompete native vegetation, interfere with natural plant succession and nutrient cycling, and tax water reserves. Because Russian-olive is capable of fixing nitrogen in its roots, it can grow on bare, mineral substrates and dominate riparian vegetation where overstory cottonwoods have died. Although Russian-olive provides a plentiful source of edible fruits for birds, ecologists have found that bird species richness is actually higher in riparian areas dominated by native vegetation.

**DISTRIBUTION IN THE UNITED STATES**

Russian-olive is found primarily in the central and western U.S., as well as in the East (e.g., Virginia to Pennsylvania), where it occurs with its exotic partner, autumn-olive (*Elaeagnus umbellata*). In the West, Russian-olive occurs mainly in the Great Basin Desert region at 800-2000 feet elevation and is also abundant in riparian zones of the Great Plains, for example, the Platte River in Nebraska.

HABITAT IN THE UNITED STATES

Russian-olive is found along streams, fields and open areas. Seedlings are tolerant of shade and it thrives in a variety of soil and moisture conditions, including bare mineral substrates.

BACKGROUND

First cultivated in Germany in 1736, Russian-olive was introduced into the U.S. in the late 1800s, and was planted as an ornamental, and subsequently escaped into the wild. Until recently, the U.S. Soil Conservation Service recommended Russian-olive for wildlife planting and windbreaks.

BIOLOGY & SPREAD

Establishment and reproduction of Russian-olive is by primarily by seed, although some vegetative propagation also occurs. The fruit of Russian-olive is a small cherry-like drupe that is readily eaten and disseminated by many species of birds.

**MANAGEMENT OPTIONS**

Mowing hedges with a brush type mower, followed by removal of cut material may be the most effective method for eradication. Herbivorous animals are not known to feed on it and few insects seem to utilize or bother it. Canker disease is occasionally a problem but not enough to be useful as a control agent.

USE PESTICIDES WISELY: Always read the entire pesticide label carefully, follow all mixing and application instructions and wear all recommended personal protective gear and clothing. Contact your state department of agriculture for any additional pesticide use requirements, restrictions or recommendations.

NOTICE: mention of pesticide products on this page does not constitute endorsement of any material.

CONTACTS

For more information on the management of Russian-olive, please contact:

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- Jeff Lovich, USGS, Biological Research Division; jeffrey_lovich at nbs.gov
- Jack DeLoach, USDA Agricultural Research Service; a021ctemple at atmail.com
- Tom Egan, USDI, Bureau of Land Management; Tom_Egan at ca.blm.gov
- U.S. Geological Survey, Biological Resources Division, Flagstaff, AZ
<http://www.nbs.na.edu/FNF/Vegetation/Exotics/Elaeagnus/elaegnusangustifolia.html>
- Virginia Natural Heritage Program - Russian-olive and Autumn-olive <http://www.state.va.us/~der/dnh/inveleag.htm>

SUGGESTED ALTERNATIVE PLANTS

When restoring areas previously infested with Russian-olive, use shrub and tree species native to the particular region and ecosystem. Native plants provide the choicest shelter and food for wildlife. Contact a native plant society in your state or the California Exotic Pest Plant Council for suggestions on western native shrubs. A few examples of shrubs native to much of the eastern U.S. include spicebush (*Lindera benzoin*), witch hazel (*Hamamelis virginiana*), pawpaw (*Asimina triloba*), flowering dogwood (*Cornus florida*), Bursting-heart or strawberry-bush (*Euonymus americanus*) and arrowwood (*Viburnum dentatum*).

OTHER LINKS

- <http://www.invasive.org/search/action.cfm?q=Elaeagnus%20angustifolia>
- <http://www.lib.uconn.edu/webapps/ipane/browsing.cfm?descriptionid=49>

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PHOTOGRAPH

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REFERENCES

- Knopf, F.L., and T.E. Olson. 1984. Naturalization of Russian-olive: implications for Rocky Mountain wildlife. *Wildlife Society Bulletin* 12:289-298.
- Shafroth, P.R., G.T. Aubla, and M.L. Scott. 1995. Germination and establishment of the native plains cottonwood (*Populus deltoides* Marshall subsp. *monifera*) and the exotic Russian-olive (*Elaeagnus angustifolia* L.). *Conservation Biology* 9:1169-1175.