

Category B—Medium

Russian olive (*Elaeagnus angustifolia*)



Photo credit: J. Randall, TNC



Photo credit: L.J. Mehrhoff



Photo Credit: J. Randall, TNC

Navajo Name
Tsin łibáhá

Origin
Native to Asia.

Description
Russian olive is a deciduous tree species that can reach a height of 25 feet tall. It's leaves are alternate, simple, lanceolate to linear, and are covered in silvery scales or hairs. Leaves, branches, and twigs are covered in silvery star-shaped scales or hairs. Branches may also have long spines along its branches. Flowers grow in clusters with each having a bell-shaped calyx and four acute yellow petals. Fruits can be yellow to red and are covered in the same scales/hairs as the rest of the plant. Bark can appear shaggy and peels off into smooth strips. Its roots can associate with nitrogen-fixing bacteria.

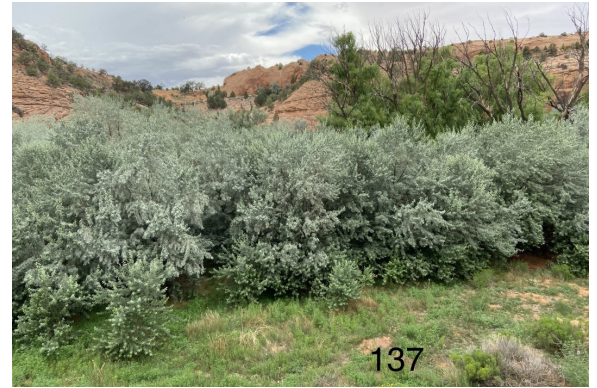


Photo credit: Bureau of Indian Affairs

Biology

Russian olive is considered invasive in much of the western United States as it grows well along riparian corridors. It prefers moist sites and tolerates drought, high water, and freezing and hot temperatures. Plants primarily reproduce by seed, but trees can resprout when cut. Seeds require a combination of stratification (prolonged cool period) and possibly scarification (roughening) for germination.

Locations

Russian olive has invaded several major washes on the Navajo Nation, including Long Canyon, Shonto Wash, Colorado Pueblo Wash, Fruitland, and the streams and tributaries near Shiprock.

Ecological Threat and Management Concerns

Russian olive grows rapidly in the riparian habitats of the southwestern United States, replacing native cottonwood and willow trees that serves as habitat for a number of migratory and sensitive bird species. While its fruits can be used as forage for wildlife, they are less preferable to fruits provided by native trees and vegetation. Thus they reduce habitat capacity and quality.

Key ID Tips

- Simple lanceolate to linear leaves with silvery scales or hairs.
- Can have spines along the growing branches.
- Silvery scales and hairs cover leaves, fruits, branches, and twigs.

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Additional safety measures and limitations may apply for each method. Refer to the [Navajo Nation Integrated Weed Management Plan](#) for more information.

Mechanical/Manual Removal

Hand pulling and digging can be effective at controlling seedlings but become less effective as plants mature. When used on larger trees, they can stimulate regrowth as root fragments can resprout. Girdling and cutting can suppress trees but trees will often resprout from the crown or the root base. Cutting trees in the mid-summer and then mowing resprouts in the summer the following year has been effective but costly. Cutting is more effective when combined with burning or herbicide applications.

Biological

No biological control organisms are available for use on the Navajo Nation.

Cultural Control

Grazing can be used to suppress Russian olive and remove seedlings and resprouts. Burning can remove some above ground material, but plants often resprout in response. Burning combined with cut stump or basal bark treatments with herbicide can be effective.

Chemical

Use of herbicides can be effective. Refer to the product labels for information application rates, timing, and approved application methods.

Recommended herbicides include:

- 2,4-D
- Aminopyralid
- Glyphosate
- Imazapyr
- Triclopyr

References

DiTomaso, J.M., G.B. Kyser et al. 2013. *Weed Control in Natural Areas in the Western United States*. Weed Research and Information Center. University of California. 544 pp.

USDA, NRCS. 2023. PLANTS Database. Available at <https://plants.sc.egov.usda.gov/>. National Plant Data Team, Greensboro, NC 27401-4901 USA



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