

Halogeton

Halogeton glomeratus



FAMILY Amaranthaceae - Amaranths

ORIGIN Eurasia

LIFE CYCLE Annual

OTHER NAMES Salt-lover, barilla

QUICK FACTS

- Halogeton is **highly toxic** to livestock, causing oxalate poisoning, kidney failure, and musculoskeletal issues when eaten in large amounts. It is most poisonous to sheep, but it can affect any livestock that grazes on it.
- Native to Eurasia, it is **highly adaptable** to many soil conditions, but it prefers drier, salty soils in bare areas. It cannot compete in areas with healthy plant coverage; instead, it invades abandoned and disturbed areas, gradually making the soils too salty for other plants to regrow.
- Halogeton's initial spread began in 1934 and quickly took over several abandoned areas. **After killing several herds of sheep**, Congress passed the Halogeton Glomeratus Control Act to research its effects, spread, and prevention.

A highly toxic plant known as the “stock killing weed”.

Halogeton is highly toxic to livestock, particularly sheep, when consumed in large quantities. Native to Eurasia, it easily establishes itself in bare, semi-arid shrublands of the Western U.S, including New Mexico. It does not compete with healthy established vegetation, so the best way to prevent Halogeton is to maintain a healthy cover of desired forage.

Its reputation began in the 1940s and 1950s, when it started causing mass deaths of sheep. There were numerous instances where entire sheep herds perished overnight. It quickly gained national attention, which urged Congress to pass the Halogeton Glomeratus Control Act in 1952 to study the control and effects of halogeton.



K. George Beck and James Sebastian, Colorado State University



laurencedel, inaturalist.org



Robert Johnson, inaturalist.org



Madeline Maher, APHIS, Bugwood.org

What does it look like?

Halogeton is a succulent annual forb, usually 6-20 inches tall. It has short, sausage-like leaves about half an inch long and bluish-green. Its stem is red when mature, and its flowers are densely clustered, greenish-yellow to red. Before flowering, it can look similar to an immature Russian thistle. Still, it can be differentiated by its cottony hairs on leaf axils and a singular bristle at the end of each leaf tip.

Plant: Most of Halogeton stems branch from a long taproot, growing horizontally before curving upwards to about 12 inches tall. The stems are typically reddish-purple because of drought, but can be green with enough water.

Roots: This weed has a taproot that can grow 20 inches deep, and a radial spread of about 18 inches.

Leaves: Halogeton leaves are small (half an inch) and bluish-green. They alternate around the stem, are cylindrical, and have a stiff bristle at the tip of each leaf. There are small white hairs between the leaf and the stem, but not the leaf itself.

Flowers: Halogeton can flower from June to September. They grow in thick clusters between the leaves and stem. The flowers lack petals; instead, they have petal-like sepals that are membranous and range from greenish-yellow to red.

Seeds: The seeds are found in thin-walled, one-seeded fruits. The fruits are often confused with flowers. They contain teardrop-shaped seeds that are either black or brown. Black seeds develop before August and are viable for a year, whereas brown seeds develop after August and can stay dormant for up to 10 years.

Impact and Management

Soil Degradation

Halogeton threatens agriculture by reducing land productivity. Halogeton also poses indirect threats to agriculture and natural resource conservation on the landscape by negatively impacting the quality. This weed contributes to soil degradation in New Mexico by altering the natural soil composition and structure. It increases soil salinity and pH and decreases moisture infiltration rate, hindering the regeneration of native vegetation, leading to long-term soil health issues and further degradation.

Livestock

Many livestock graze on halogeton when hungry or thirsty, but it is highly toxic to ruminants, especially sheep and cattle. If more desirable vegetation is available, halogeton will be avoided, but as little as half a pound can kill a sheep. While livestock can adapt to oxalate-containing plants over time, treating an already poisoned animal is difficult, and the prognosis is usually poor.

Economic

This weed wreduces the available forage for domestic livestock and often causes harm to all livestock through oxalate poisoning, which usually leads to death. Affected fields should not be grazed on



R. George Beck and James Sebastian, CSU

Halogeton cannot outcompete healthy plants, so the best way to avoid this weed is to maintain healthy crops and avoid unnecessary soil disturbance. Because Halogeton is a simple-rooted annual, it can effectively be controlled through tillage or pulling. It is easiest to control as a seedling or early in its life before the plant reaches full maturity. Avoid overgrazing, fire, or other major soil disturbances, as these conditions favor halogeton germination. Leaving soil bare for long periods increases the likelihood of infestation.

DO's

- Plant native or other desirable species to avoid halogeton seeding.
- Pull or cut the halogeton while it is young and before it has seeded.
- Continue to check affected areas for regrowth to prevent further infestations.

DON'Ts

- Do not disturb the soil or leave it bare, as this gives time for the weed to spread
- Leave to flower, as seeds appear quickly and are easily spread.
- Allow livestock to graze on halogeton, as it is poisonous.



For more information on managing halogeton, please visit www.nmweeds.org

