

Malheur wire-lettuce (*Stephanomeria malheurensis*)



ENDANGERED



Flowers (left), habit (center), and habitat (right) of Malheur wire-lettuce. Photos by Melissa Carr (left and center), and Rebecca Currin (right). If downloading images from this website, please credit the photographer.

Family

Asteraceae

Plant description

Malheur wire-lettuce is an annual species, with seeds that germinate in the early spring (usually starting around the first week of April) and subsequently form glabrous-leaved basal rosettes up to 15 cm in diameter. The rosette typically bolts in late May-June, forming a wiry network of flowering branches generally less than 30 cm long. Flower heads are numerous and clustered or single on short peduncles, with 5-6 (rarely up to 11) florets per head. Flower heads contain 5-6 ligules approximately 8.2-9.4 mm long and 3.2-3.6 mm wide starting in late June. Flowers are white or light to dark pink, and can change to salmon-colored with age. Fruits mature from July through October. Each head produces 5-sided, generally rugose-tuberculate achenes averaging 3.3-3.8 mm long and bearing 9-12 pappus bristles.

Distinguishing characteristics

Malheur wire-lettuce co-occurs with its putative parent, *Stephanomeria exigua* ssp. *coronaria*, and the two species are difficult to distinguish in the field. When grown in a controlled setting, Malheur wire-lettuce typically produces fewer branches, flower heads and seeds than *S. exigua* ssp. *coronaria*. However, these distinctions are not so obvious in the field. The most reliable way to distinguish between the two species is to examine the achenes. Malheur wire-lettuce achenes are about 1/3 longer and two times heavier than those of *S. exigua* ssp. *coronaria* and they have branched pappus bristles (as opposed to the simple pappus bristles of *S. exigua* ssp. *coronaria*).

In addition to *S. exigua* ssp. *coronaria*, two other species of *Stephanomeria* occur in Harney County. *S. tenuifolia* is a perennial, 2-7 dm in height, with smooth achenes (except for being longitudinally ribbed). *S. paniculata* is an annual, 2-10 dm in height, with paniculiform inflorescences and seeds having a tawny or brownish pappus.

When to survey

July-September (when this species is in fruit)

Habitat

This species was originally located on a hillside above Harney Lake, on soils derived from volcanic tuff and layered with thin crusts of limestone. This differs from surrounding soils, which are derived from basalt. The altitude at the site is approximately 1500 meters, and the shrub-steppe vegetation is dominated by big sagebrush (*Artemisia tridentata*), rabbitbrush (*Ericameria nauseosa* and *Ericameria viscidiflora*), and cheatgrass (*Bromus tectorum*).

Range

Malheur wire-lettuce is known from a single location in southeastern Oregon, approximately 25 miles south of Burns.

Oregon counties

Harney

Federal status

Endangered

Threats

Because this species is known from only a single location, it is extremely vulnerable to any changes in habitat. Fire, grazing, and the invasion of non-native invasive species such as cheatgrass (*Bromus tectorum*) are the primary threats.

Did you know?

Malheur wire-lettuce was discovered by Dr. Leslie Gottlieb in 1966. The species was formally described in 1978, and listed as endangered by the U.S. Fish and Wildlife Service in 1982. However, federal listing was not enough to prevent the disappearance of this rare wire-lettuce. By 1985 no Malheur wire-lettuce plants were observed at the site, and the species was considered extinct in the wild. Disappearance of Malheur wire-lettuce was correlated with a large increase in cheatgrass (*Bromus tectorum*), a non-native invasive annual grass which had appeared at the site after a fire. The first attempt at reintroducing Malheur wire-lettuce back into nature was initiated in 1987. Plants persisted at the reintroduction site in annually decreasing numbers, and by 2004 the species had once again disappeared, and was considered extinct in the wild. Luckily, Malheur wire-lettuce seed was collected by Dr. Gottlieb, and stored at the seed bank facility at the Berry Botanic Garden, making additional attempts to recover this species possible.

Current/Recent ODA projects

Reintroduction of the extinct Malheur wire-lettuce

References

Brauner, S. 1988. Malheur wirelettuce (*Stephanomeria malheurensis*) biology and interactions with cheatgrass: 1987 study results and recommendations for a recovery plan. Unpublished report for the Bureau of Land Management, Burns District, Oregon.

Gottlieb, L.D. 1973. Genetic differentiation, sympatric speciation, and the origin of a diploid species of *Stephanomeria*. American Journal of Botany 60:545-553.

- Gottlieb, L.D. 1977. Genotypic similarity of large and small individuals in a natural population of the annual plant *Stephanomeria exigua* ssp. *coronaria* (Compositae). *Journal of Ecology* 65:127-134.
- Gottlieb, L.D. 1978. *Stephanomeria malheurensis* (Compositae), a new species from Oregon. *Madroño* 25:44-46.
- Gottlieb, L.D. 1991. The Malheur wire-lettuce: a rare, recently evolved Oregon species. *Kalmiopsis* 1:9-13.
- Gottlieb, L.D. 2006. Professor emeritus. University of California, Department of Genetics, Davis, California, 95616. Personal communication on June 15, 2006.
- Guerrant, E.O. Jr. 1996. Experimental reintroduction of *Stephanomeria malheurensis*. In D.A. Falk, C.I. Millar and M. Olwell, editors. *Restoring diversity: strategies for reintroduction of endangered plants*. Island Press. Washington, D.C.
- Hitchcock, C.L. and A. Cronquist. 1973. *Flora of the Pacific Northwest*. University of Washington Press. Seattle, Washington.
- Oregon Flora Project. 2008. Online plant atlas. <http://cladonia.nacse.org/platlas/jclass/OPAJava20.htm>. Accessed February 5, 2008.
- Raven, A.N. 2001. A summary of eleven years of research on an experimental reintroduction of Malheur wirelettuce, *Stephanomeria malheurensis* (1987-1997). Report prepared for the Bureau of Land Management, Burns, Oregon. The Berry Botanic Garden, Portland, Oregon.
- U.S. Fish and Wildlife Service. 1990. *Stephanomeria malheurensis* recovery plan. Prepared by R.L. Parenti for U.S. Fish and Wildlife Service, Region 1, Portland, Oregon.