

South Fork John Day milkvetch (*Astragalus diaphanus* var. *diurnus*)



THREATENED



Pods (left), habit (center), and habitat (right) of South Fork John Day milkvetch. Photos by ODA staff (left and center) and Gerald Carr (right). If downloading images from this website, please credit the photographer.

Family

Fabaceae

Taxonomic Notes

Specimens intermediate between *Astragalus diaphanus* var. *diurnus* and var. *diaphanus* have been collected along the John Day River from Grant and Wheeler counties, north of the known range of var. *diurnus*.

Plant description

South Fork John Day milkvetch is a tap-rooted annual, or possibly short-lived perennial, with several cespitose, spreading, strigose stems 10-40 cm long. Leaves are 3-5 cm long with slender petioles. Leaflets number 9-15, are oblong to obovate, glabrous above and strigose beneath, and 0.5-1.0 cm long. Racemes are short, few-flowered, and are borne on peduncles mostly shorter than the leaves. The calyx is strigose and approximately 0.4 cm long, the subulate teeth equaling or nearly equaling the tube. The corolla is cream or purplish-tinged and 0.5-0.8 cm long. Pods are inflated, ovoid-reniform, finely whitish-strigillose, sessile, 1.5-2.0 cm long and over half as wide. Pods are 1-celled but the lower suture is slightly intruded and forms a thin partial partition.

Distinguishing characteristics

Astragalus diaphanus var. *diaphanus* very closely resembles South Fork John Day milkvetch and both occur along the John Day River. However, the two taxa can be distinguished by fruit morphology. South Fork John Day milkvetch pods are distinctly inflated and ovoid-reniform, with a scarcely developed partition, whereas *A. d.* var. *diaphanus* pods are linear-oblong, strongly arcuate, and compressed, with a nearly complete partition formed by the intrusion of the lower suture.

When to survey

Surveys for South Fork John Day milkvetch should be completed when the taxon is fruiting and can be distinguished from the closely related *Astragalus diaphanus* var.

diaphanus, typically from mid May to mid June.

Habitat

South Fork John Day milkvetch usually occurs on dry, barren slopes in gravelly, shallow soils overlying basalt. It is found in openings in juniper woodland at elevations ranging from 760-1100 m (2500-3600 ft).

Associated plant species include *Achillea* sp., *Agropyron* sp., *Alyssum* sp., *Artemisia tridentata*, *A. rigida*, *Blepharipappus* sp., *Bromus* sp., *Cryptantha* sp., *Ericameria nauseosa*, *Eriogonum compositum*, *E. microthecum*, *E. sphaerocephalum*, *E. strictum*, *Epilobium* sp., *Eriophyllum lanatum*, *Gutierrezia sarothrae*, *Juniperus occidentalis*, *Lewisia rediviva*, *Lomatium* sp., *Phacelia* sp., *Poa* sp., *Purshia* sp., *Salvia dorii*, and *Senecio* sp.

Range

This taxon is restricted to the south fork of the John Day River within the Blue Mountains ecoregion.

Oregon counties

Grant

Federal status

None

Threats

A primary threat to South Fork John Day milkvetch is habitat destruction due to excavation of cinders for road maintenance. The species is strongly influenced by spring precipitation and may be negatively impacted by prolonged periods of unfavorable climatic conditions. Other potential threats to the species include exotic weed invasions, changes in historic fire regimes, and off-road vehicle use.

Did you know?

The type specimen for this taxon was collected by Thomas Howell in 1885. The taxon was first described by Watson as *Astragalus diurnus* the following year.

References

Croft, L. K., W. R. Owen, and J. S. Shelly. 1997. Interior Columbia Basin Ecosystem Management Project Analysis of Vascular Plants. U.S. Forest Service, Pacific Northwest Research Station. Available at http://www.icbemp.gov/science/croft_1.pdf (pdf document, 6.92 MB). Accessed January 24, 2011.

Gisler, S. and R. Meinke. 2001. Reproductive ecology, seed banking, and cultivation of five at-risk legume species in Oregon. Report prepared for U.S. Fish and Wildlife Service, Region 1. Oregon Department of Agriculture, Salem, Oregon.

Hitchcock, C. L., A. Cronquist, M. Ownbey, and J. W. Thompson. 1961. Vascular plants of the Pacific Northwest. Part 3: Saxifragaceae to Ericaceae. University of Washington Press, Seattle.

OFP (Oregon Flora Project). 2011. Oregon Plant Atlas.

<http://www.oregonflora.org/atlas.php>. Accessed, January 20, 2011.

ORBIC (Oregon Biodiversity Information Center). 2010a. Rare, threatened and endangered species of Oregon. Institute for Natural Resources, Portland State University, Portland, Oregon. 105 pp. Available at <http://orbic.pdx.edu/documents/2010-rte-book.pdf> (pdf document, 971 kB). Accessed, December 13, 2010.

ORBIC (Oregon Biodiversity Information Center). 2010b. ORBIC element occurrence database. Portland, Oregon.

Peck, M. E. 1961. A manual of the higher plants of Oregon. Binford and Mort, Portland, Oregon.