Sulphur flowered-buckwheat, *Eriogonum umbellatum*

Range

Southern British Columbia south to California, and eastward to Colorado, Wyoming, Montana, and New Mexico.[8, 9]

Climate, elevation

Sea level to subalpine elevation, in dry areas with moderate to low rainfall.[8,9]

Local occurrence

Predominately east of the Cascades, but does occur in some counties west of the Cascades[2]. Does not occur in King County[2].

Habitat preferences

Dry open sites in valleys and on mountain slopes with rocky, sandy, and will drained soils.[8,9]

Plant strategy type/successional stage

Early primary succession in subalpine environments.[11]

Associated species

Arenaria,, Artemisia, Juniperus, Lupinus, Antennaria, Castilleja, Cisanthe, Polygonum, Aster, Abies lasiocarpa[2]

May be collected as:

Seed and soft-wood cutting.[3]

Collection restrictions or guidelines

Sulphur buckwheat flowers from June to August.[10] Seeds (achenes) mature uniformly in approximately 6 to 8 weeks (August-sept), when the perianth is paper-dry (in some cases it turns a rust color) and the hard, filled seeds dehisce readily.[4] Most of the flowers contain no fruits, but the fruits that are present are filled.[6]

Seed germination

E. umbellatum occupies a wide range of elevations and habitats; chilling requirements have been shown to vary considerably from one collection site to another.[4] Schimdt found that it required no pretreatment and can be planted in the fall[1]. Seeds are imbibed in water for 10 minutes prior to a 60 to 90 day cold moist stratification.[4] Seeds are placed in fine mesh bags and buried in peat moss in ventilated containers under refrigeration at 3C.[4] Many seeds had radicle emergence at 60 days in cold stratification at 3C.[4]

Seed life

Seed longevity is 5 to 7 years.[4]

Recommended seed storage conditions

Sealed containers at 3 to 5C with low relative humidity.[4]

Soil or medium requirements

Plant in a coarse soil medium[1] and add a thin layer of sand or gravel to reduce damping off which caused the majority of seedling mortalities.[5]

Installation form

3" pots[1]

Recommended planting density

Seed is hand sown at the rate of 2 seeds per cell in 160 ml (7 cu. inch) pots[4]
Planting density per acre when outplanted: 1200-4800.[7]

Care requirements after installed

This species does not tolerate frequent irrigation[4] or shade.[7]
Low water use, needs good drainage, does not like humid climates.[3]

Normal rate of growth or spread; lifespan

Mature height is 4-18 inches tall and 3 feet wide.[3] Life expectancy can exceed 20 years.[7]

Sources cited

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[2]http://biology.burke.washington.edu/herbarium/imagecollection.php

[3]http://www.desert-tropicals.com/Plants/Polygonaceae/Eriogonum_umbellatum.html

[4]Corey, Susan; Luna, Tara. 2004. Propagation protocol for production of container *Eriogonum umbellatum* Torr. plants (116 ml conetainers); Glacier National Park, West Glacier, Montana.

[5]Parkinson, Hilary; DeBolt, Ann. 2005. Propagation protocol for production of container *Eriogonum umbellatum* Torr. plants; USDA Forest Service, Rocky Mountain Research Station, Boise, Idaho.

[6]http://www.utahschoice.org/FactsheetLinkpage.htm#

[7]http://plants.nrcs.usda.gov/cgi_bin/plant_attribute.cgi?symbol=ERUM

[8]Dayton, W.A. 1960. Notes on Western Range Forbs: Equisetaceae through Fumariacea. USDA Forest Service Handbook No. 161 Washington D.C.: U.S. Government Printing Office. 71p.

[9]USDA Forest Service. 1988. Range Plant Handbook. New York: Dover Publications, Inc 816p.

[10]Stead, S., and R.L. Post. 1989. Sulfur flower, buckwheat (*Eriogonum umbellatum*). Plants for the Lake Tahoe Basin. Soil Conservation Service, Nevada Cooperative Extension. Fact Sheet 89-71.

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