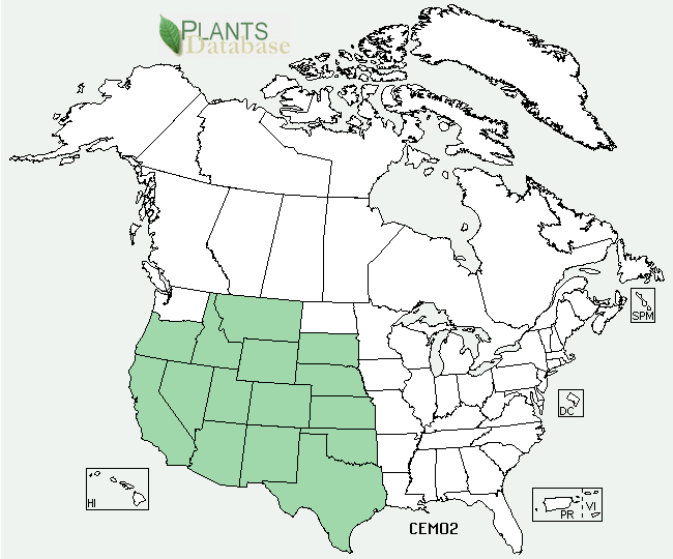
**Plant Propagation Protocol for *Cercocarpus montanus***
ESRM 412 – Native Plant Production
Protocol URL: https://courses.washington.edu/esrm412/protocols/CEMO2.pdf



USDA

| TAXONOMY | |
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| Plant Family | |
| Scientific Name [1] | *Rosaceae* |
| Common Name [1] | Rose |
| Species Scientific Name | |
| Scientific Name [2] | *Cercocarpus montanus* Raf. |
| Varieties [2] | None |
| Sub-species [1,4] | *Cercocarpus montanus* var. *argenteus*<br>*Cercocarpus montaus* var. *blancheae*<br>*Cercocarpus montanus* var. *glaber*<br>*Cercocarpus montanus* var. *macrourus*<br>*Cercocarpus montanus* var. *minutiflorus*<br>*Cercocarpus montanus* var. *montanus*<br>*Cercocarpus montanus* var. *paucidentatus* |
| Cultivar | None |
| Common Synonym(s) | None |
| Common Name(s) [4] | Alderleaf Mountain Mahogany, Silver Mountain Mahogany, Island Mountain Mahogany, Birchleaf Mountain Mahogany, Klamath Mountain Mahogany, Smooth Mountain Mahogany, Hairy Mountain Mahogany |
| Species Code (as per USDA Plants | CEMO2 |

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| database) [1] | |
| **GENERAL INFORMATION** | |
| Geographical range [1,3] | -Western North America<br>-Found in Oregon and Wyoming, South to California and Mexico |
| Ecological distribution [2,3] | -Dry, rocky bluff or mountainsides<br>-Ridges, desert foothills, rocky outcrops<br>-Usually found on steep slopes |
| Climate and elevation range [3] | Semiarid; 1,000-3,000m |
| Local habitat and abundance [1,2,4] | -This species is associated with chaparral, northern oak woodlands, pine and mixed conifer forests, alpine shrub, sagebrush and aspen<br>-Located in the Rocky Mountains, Wasatch Mountains in Idaho, Roosevelt and White Rive National Forests in California as well as all over the Northwest<br>-Abundant |
| Plant strategy type / successional stage [2,4] | -This species occupies well-drained coarse soils and poorly developed sites<br>-Can tolerate early-seral site conditions and become dominant in several climax communities<br>-CEMO2 can fix nitrogen |
| Plant characteristics [2,4] | -Shrub tree that is 1-7m tall, and mostly deciduous<br>-Leaves are simple alternate and 2 inches long<br>-Flowers are perfect and clustered in the axils of short spur-like branches |
| **PROPAGATION DETAILS** | |
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| Propagation Goal [3,4] | Plants |
| Propagation Method [2] | Seed |
| Product Type [4,6] | Bare-root or container seedlings |
| Stock Type [4,6] | 2 year old bare-root or container seedlings |
| Time to Grow [4,6] | 2 years |
| Target Specifications [2] | -Seedlings grow slowly, and should be at least two years old<br>-Height should be 1-2 inches after two growing season |
| Propagule Collection Instructions [3] | -Sow in autumn or late winter in a cold frame |
| Propagule Processing/Propagule Characteristics [6] | -Seed dormancy is physiological dormancy<br>-Seeds lose viability in dry storage after 5-7 years<br>-Seed density N/A |
| Pre-Planting Propagule Treatments [2,6] | -Seeds require 1 to 3 months of cold stratification<br>-Germinate seedlings on moist filter paper after at least 1 month of stratification<br>-Germination occurs at 22-27 degrees Celsius |
| Growing Area Preparation / Annual Practices for Perennial Crops[2] | -Adequate moisture in soils is important<br>-Seedlings are vulnerable to frost and drought and |

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| | should be grown indoors or in a greenhouse<br>-Seedlings prefer mesic conditions and soil with a large litter layer or dark soil with a large amount of organic material<br>-Seedlings should be shaded for the majority of the day |
| Establishment Phase Details [2,4] | -Seeds should be watered frequently<br>-Soil salts will encourage growth and establishment |
| Length of Establishment Phase [4] | 3-4 months; February to May |
| Active Growth Phase [4,7] | -Seedlings grow slowly and must be at least 2 years old before they are large enough to dig and use for potting |
| Length of Active Growth Phase [4] | 18 months |
| Hardening Phase [2] | -Seedlings should be shaded and the use of soil salts should decrease during the hotter months |
| Length of Hardening Phase [2,4] | August- November 3-4 months |
| Harvesting, Storage and Shipping [2,4] | -Seedlings can be harvested and potted after 2-3 years of growing.<br>-Seedlings are not do not survive in long-term storage |
| Length of Storage [4,6] | 3 months |
| Guidelines for Outplanting / Performance on Typical Sites [4] | -No special planting techniques are needed for this species other than normal procedures for any transplanted material.<br>-Seedlings will start producing seeds after 8 years. |
| Other Comments [2,6,8] | There are many subspecies, and stratification varies slightly for each. Some of the literature was contradictory and experimental to find the best propagation methods. There was not a large amount of information for the species concerning propagation. |
| **INFORMATION SOURCES** | |
| References | 1- USDA-NRCS, Plants Database. Plants Profile for *Cercocarpus montanus*. Web. http://www.plants.usda.gov/core/profile?symbol=cemo2. Accessed May 15, 2015.<br><br>2-Gucker, Corey L. 2006. *Cercocarpus montanus*. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Moutntain Research Station, Fire Sciences Laboratory. Web. http://www.fs.fed.us/database/feis Accessed May 15, 2015.<br><br>3- Plants for a Future *Cercocarpus montanus*. 2012. Web. www.pfaf.org. Accessed May 15, 2015.<br>4- Concservation Release Brochure for 'Montane' mountain mahogany (Cercocarpus montanus). USDA-Natural Resources Conservation Service, Los Lunas Plant Materials Center, Los Lunas, New Mexico. |

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| | Published August 1978.<br><br>6- Baskin, Carol C., Baskin, Jerry M. 2002. Propagation protocol for production of container *Cercocarpus montanus* Raf. Plants; University of Kentucky, Lexington, Kentucky. In: Hative Plant Network. Web. http://www.nativeplantnetwork.org. Accessed May 17, 2015.<br><br>7-Piatt, J.R. Seed size affects germination of true mountain mahogany. Journal of Range Management. Vol. 26, 231-232. 1973. |
| Other Sources Consulted | 5- Lee S. Rosner, Jon T. Harrington, David R. Dresden, Leigh Murray. Journal of Rangeland Mgmt. Vol 56, No. 2, March 2003. Overcoming Dormancy in New Mexico Mountain Mahogany Seed Collections.<br><br>8- Plummer, A. Perry; Christensen, Donald R.; Monsen, Stephen B. 1968. Restoring big-game range in Utah. Publ. No. 68-3. Ephraim, UT: Utah Division of Fish and Game. 183 p. [4554]<br><br>9- Riegel, Gregg M.; Smith, Bradley G.; Franklin, Jerry F. 1992. Foothill oak woodlands of the interior valleys of southwestern Oregon. Northwest Science. 66(2): 66-76. [18470]<br><br>10- Andersen, Berniece A.; Holmgren, Arthur H. [1976]. Mountain plants of northeastern Utah. Circular 319. Logan, UT: Utah State University, Extension Services. 148 p. [312] |
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