Plant Propagation Protocol for *Garrya fremontii*

ESRM 412 – Native Plant Production


Photograph by R.A. Howard @ USDA-NRCS PLANTS Database. Courtesy of Richard A. Howard Photograph Collection, Smithsonian Institution. (23)

| TAXONOMY | |
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| Family Names | |
| Family Scientific Name: | Garryaceae Lindl., nom. cons. |

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| Family Name Synonym: | Aucubaceae J. Agardh (22, 23) |
| Family Common Name: | Silk tassel, silktassel |
| Scientific Names | |
| Genus: | *Garrya*<br><br>For Nicholas Garry, a friend of botanist David Douglas (1799–1834).(16) |
| Genus Common Names: | garrya, silk tassel, silk tassel bush, silk tassel tree, silktassel, silk-tassel, silktassel bush, silk-tassel bush, silktassel tree, silk-tassel tree, tassel bush, tasselbush, tassel-bush, tasseltree. (22, 23) |
| Species: | *fremontii*<br><br>For explorer Captain John C. Fremont, "The Great Pathfinder" (1930–1900)(3) |
| Species Authority: | Torr. (John Torrey) |
| Variety: | None current in USDA Plants Database (23) |
| Subspecies: | None current in USDA Plants Database (23)<br><br>Historically:<br><br>• *Garrya fremontii* var. *fremontii* Eastw. (1903).(12)<br>• *Garrya rigida* Eastw. formerly included under *Garrya fremontii*.(5, 12) |
| Cultivar: | |
| Authority for Variety/Subspecies: | Historical subspecies authority: Alice Eastwood |
| Common Synonym(s) (include full scientific names (e.g., *Elymus glaucus* Buckley), | *Garrya fremontii* var. *laxa* Eastw. (1903) is synonymous with *Garrya fremontii*.(9, 23) |

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| including variety or subspecies information) | |
| Common Name(s): | bear brush, bearbrush, bear-brush, California fever bush, California feverbush, California fever-bush, flannel bush, Frémont silk tassel, Frémont silk tassel bush, Frémont silktassel, Frémont silk-tassel, Frémont silk-tassel bush, Frémont tasselbush, Frémont's silk tassel, Frémont's silk tassel bush, Frémont's silktassel, Frémont's silk-tassel, Frémont's silk-tassel bush, Frémont's tasselbush, green-leaf silk-tassel, mountain silktassel, mountain silk-tassel, mountain silktassel bush, quinine bush, skunk bush, skunkbush, squawbush, upland silk tassel bush |
| Species Code (as per USDA Plants database): | GAFR |
| GENERAL INFORMATION | |
| Geographical range (distribution maps for North America and Washington state) |  <br>(23)<br><br>Southern Washington throughout California.(4, 9, 11, 12, 23) |

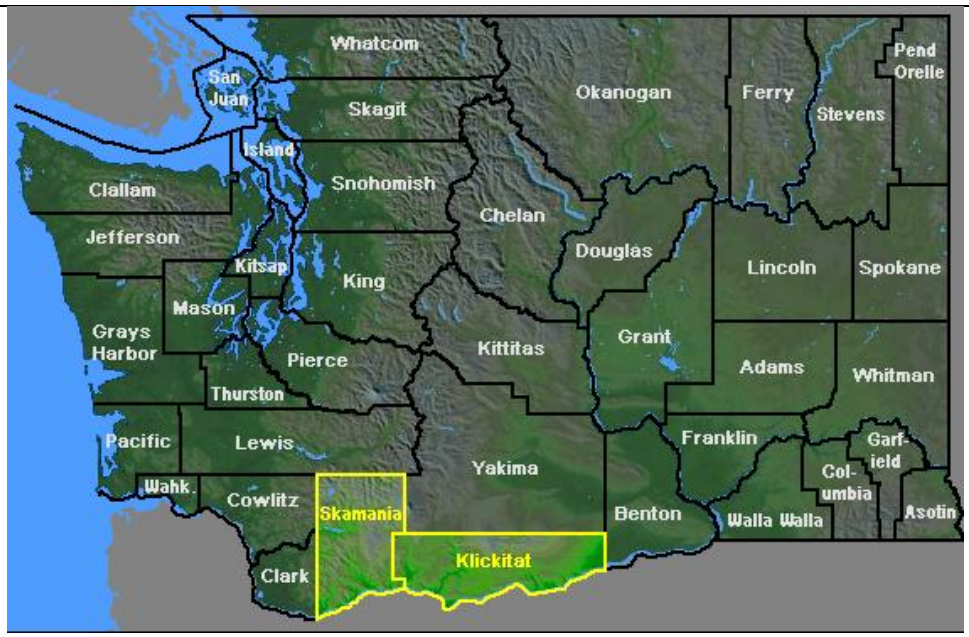


**Figure 1: From Burke Museum of Natural History and Culture.**(9)

**In Washington:** Skamania and Klickitat Counties, along the Columbia River.(9)

**In Oregon and California:** Along the Columbia River; in the Siskiyou Mountains; and in the Klamath Mountains and Pacific Coast Ranges, from Josephine and Jackson counties, OR, to Madera County, CA. In the Cascade Range and Sierra Nevada, from Lane County, OR, to Madera County, CA. A distinct population occurs in Orange and San Diego counties, in the Peninsular Range and the east-west Transverse Ranges.(4, 9, 11, 12, 23)

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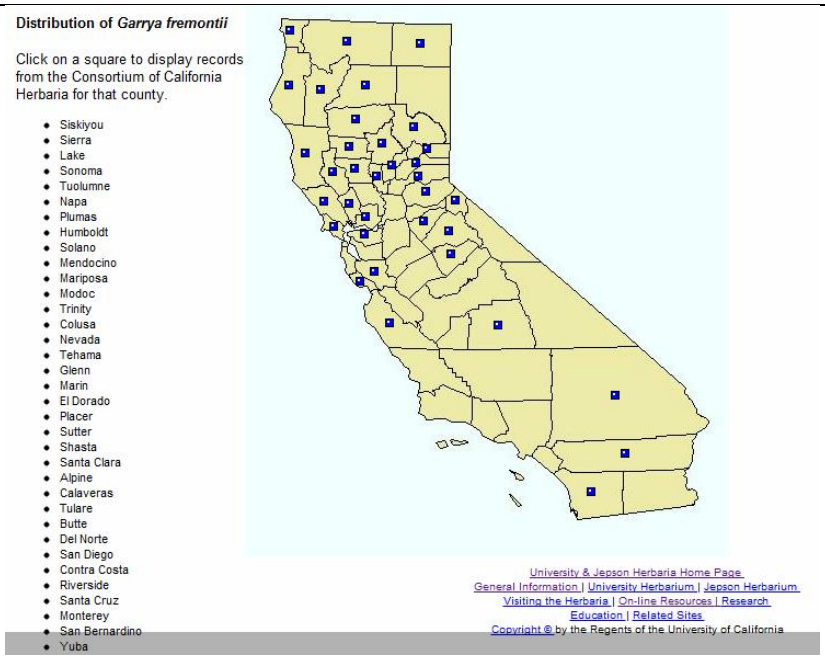
| |  <br>**Figure 2: California distribution of *G. fremontii* by county.**(4) |
| Ecological distribution (ecosystems it occurs in, etc) | Ecosystems(4):<br><br>• Chaparral—mountain shrub (FRES34)<br>• Douglas-fir (FRES20)<br>• Ponderosa pine (FRES21)<br>• Redwood (FRES27)<br>• Western hardwoods (FRES28)<br>• Western white pine (FRES22)<br><br>Kuchler associations(4):<br><br>• California mixed evergreen forest (K029)<br>• California oakwoods (K030)<br>• Chaparral (K033)<br>• Douglas-fir forest (K012)<br>• Mixed conifer forest (K005)<br>• Montane chaparral (K034): *Garrya fremontii* dominant or codominant<br>• Mosaic of K002 and K026 (K028)<br>• Oregon oakwoods (K026)<br>• Ponderosa shrub forest (K010)<br>• Red fir forest (K007)<br>• Redwood forest (K006)<br>• Western ponderosa forest (K011)<br><br>In montane chaparral, *G. fremontii* is dominant or codominant; in other |

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| | chaparral habitat types, it usually occurs as scattered individuals.(4)<br><br>In California, *Garrya fremontii* is a dominant or codominant in the shrub canopy in the following alliances (17):<br><br>• *Arctostaphylos hookeri* Provisional Shrubland Alliance (Hooker's manzanita chaparral)<br>• *Arctostaphylos montereyensis* Provisional Shrubland Alliance (Monterey manzanita chaparral<br>• *Arctostaphylos patula* Shrubland Alliance (green leaf manzanita chaparral)<br>• *Artostaphylos viscida* Shrubland Alliance (white leaf manzanita chaparral)<br>• *Ceanothus cuneatus* Shrubland Alliance (wedge leaf ceanothus chaparral, buck brush chaparral)<br>• *Chrysolepis sempervirens* Shrubland Alliance (Bush chinquapin chaparral)<br>• *Holodiscus discolor* Shrubland Alliance (Ocean spray brush) |
| Climate and elevation range | Hardy to USDA Zone 6 or 7, sun or part shade.<br><br>*G. fremontii* occurs in Mediterranean climates, which have cool, wet winters, and hot, droughty summers. Temperatures are usually mild. Rainfall ranges from 12 to 40 inches, most of it in winter.(10, 12)<br><br>Elevation reports range from 0 to nearly 9,000 feet.(9, 11, 12, 21)<br><br>In Washington, *G. fremontii* occurs at low to moderate elevations.(9) |
| Local habitat and abundance; may include commonly associated species | **Conservation status**<br><br>In Washington, more abundant or less rare than assumed (before July 2011), occurring in woodlands and chaparral. As of 1988, global abundance according to NatureServe ratings was between "apparently secure" (either uncommon though not rare, with some cause for concern), and "abundant" (common and abundant). State status is not ranked. (15, 24)<br><br>**Commonly associated species**<br><br>Society of American Foresters Forest Cover Types:(7)<br><br>• Blue oak - Digger pine (SAF 250)<br>• California black oak (SAF 246)<br>• California coast live oak (SAF 255)<br>• Canyon live oak (SAF 249)<br>• Douglas-fir - tanoak - Pacific madrones (SAF 234)<br>• Douglas-fir - western hemlock (SAF 230) |

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| | • Jeffrey pine (SAF 247)<br>• Knobcone pine (SAF 248)<br>• Oregon white oak (SAF 233)<br>• Pacific Douglas-fir (SAF 229)<br>• Pacific ponderosa pine - Douglas-fir (SAF 244)<br>• Pacific ponderosa pine (SAF 245)<br>• Port-Orford-cedar (SAF 231)<br>• Redwood (SAF 232)<br>• Sierra Nevada mixed conifer (SAF 243)<br><br>Additional associates include:(12)<br><br>• *Abies concolor* (white fir)<br>• *Adenostoma fasiculatum* (chamise)<br>• *Arctostaphylos* spp. (manzanita)<br>• *Bromus mollis* (soft chess)<br>• *Ceanothus cuneatus* (buckbrush)<br>• *Cercis occidentalis* (redbud)<br>• *Cerocarpus betuloides* (birchleaf mountain-mahogany)<br>• *Erodium cicutarium* (cutleaf filaree)<br>• *Festuca magalura* (foxtail fescue)<br>• *Heteromeles arbutifolia* (toyon)<br>• *Pinus coulteri* (Coulter pine)<br>• *Quercus dumosa* (scrub oak)<br>• *Q. sadleriana* (deer oak)<br>• *Toxicodendron diversilobium* (poison-oak)<br>• *Trifolium* spp. (clovers) |
| Plant strategy type / successional stage (stress-tolerator, competitor, weedy/colonizer, seral, late successional) | Most common as a climax or pyric-climax species in chaparral, a fire-maintained ecosystem.<br><br>Also occurs in other stages of succession as a facultative seral species or pioneer, from sprouting survivor in initial and early seral communities through late seral stages in foothills forests and woodlands communities.<br><br>Then succeeded by *Pinus monticola* (white pine), *Pinus ponderosa* or *Pinus jeffreyi* (Ponderosa or Jeffrey pine), *Pseudotsuga menziesii* (Douglas fir), *Quercus* spp. (oaks), *Sequoia sempervirens* (coastal redwood).(10, 12) |
| Plant characteristics (life form (shrub, grass, forb), longevity, key characteristics | Dioecious, evergreen, many-branched shrub to 3 meters.<br><br>Leaves 4–8 cm opposite, entire, elliptic-ovate to elliptic-oblong, and leathery; yellow-green below.<br><br>Flowers January through May; adapted for wind pollination. Staminate flowers axillary or terminal, drooping, catkinlike racemes to 9 cm. Unbranched racemes |

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| , etc) | comprising flowers in 3s in cuplike bracts, with 4 alternate stamens and 4 elongate sepals. Pistillate flowers similar except bracts densely silk, with an inferior ovary, 2 sepals, 2 spreading styles.<br><br>Fruits are a 5–6 mm dry, globose, seeded berry, dark purple when ripe, persisting June through December. Produce one to three 2–3 mm seeds.(9, 11, 13, 14, 18, 19, 23, 26) |
| PROPAGATION DETAILS | |
| Ecotype (this is meant primarily for experimentally derived protocols, and is a description of where the seed that was tested came from): | |
| Propagation Goal (Options: Plants, Cuttings, Seeds, Bulbs, Somatic Embryos, and/or Other Propagules): | Plants |
| Propagation Method (Options: Seed or Vegetative): | Seed, vegetative |
| Product Type (options: Container (plug), Bareroot (field grown), Plug + (container- | Propagules, containers<br><br>**The following information is for *G. elliptica* and might not apply to *G. fremontii*:** containers/plugs.(25) |

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| field grown hybrids, and/or Propagules (seeds, cuttings, poles, etc.)) | |
| Stock Type: | Unknown for *G. fremontii*<br><br>**For *G. elliptica:*** Deepot 40 (25) |
| Time to Grow (from seeding until plants are ready to be outplanted): | |
| Target Specifications (size or characteristics of target plants to be produced): | Unknown for *G. fremontii*<br><br>**For *G. elliptica*:** firm root plug in container. (12) |
| Propagule Collection (how, when, etc): | **Seeds**<br><br>Fruits are ripe August through December. **For *Garrya* spp.:** Collect ripe fruit by hand. Be sure to collect only fruits that are not infested with insect larvae.(18, 26)<br><br>**Cuttings**<br><br>Cuttings taken in late summer grow best with bottom heat.(14)<br><br>**Various procedures for *Garrya* spp.:**<br><br>• American Horticultural Society: vegetative propagation by semiripe stem cuttings in summer and late autumn.(1)<br>• Washington Park Arboretum: softwood cuttings in July and August and by hardwood cuttings in November.(20)<br>• Plants For A Future Database: In August, stick 10-cm cuttings of half-ripe wood with a heel in a cold frame. December and January, use 10–12 cm heel cuttings of mature wood; place in frame.(8) |
| Propagule | ***G. fremontii* seeds:** 65/g., average 29,500/lb., or yield about 50% cleaned seeds |

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| Processing/Propagule Characteristics (including seed density (# per pound), seed longevity, etc): | by fruit weight.(18, 26)<br><br>**The following information is for *Garrya* spp. in general and might not apply to *G. fremontii*:** 85 to 99% of seeds are sound. Store *Garrya* spp. as for seeds of most shrub species.(18) |
| Pre-Planting Propagule Treatments (cleaning, dormancy treatments, etc): | **Cleaning *Garrya spp.*:** Crush fruits and float away empty seeds and pulp, using a macerator or fine sieve.(18, 25, 26)<br><br>**Breaking embryo dormancy in *G. fremontii* has succeeded using the following procedures:**<br><br>• Stratify at low temperatures (5 °C) in moist sand, peat, or vermiculite 30 to 120 days and then soak 17 hours in 100 p.p.m. gibberellin.(14)<br>• Sow seeds and, at 60 days, cold stratify 1 to 2 months, inspecting periodically for seedlings. Results vary among seed batches.(6)<br>• Stratify at greenhouse temperatures 90 days followed by 90 days at 5 °C.(18)<br>• Immediately sow ripe fruit in cold frame.(8)<br><br>Various temperature stratification regimes have succeeded for *G. elliptica* and *Garrya* spp. |
| Growing Area Preparation / Annual Practices for Perennial Crops (growing media, type and size of containers, etc): | **For *G. elliptica*:** In fully controlled greenhouse, sow 6 g. seed per flat May 1 in an aggregate of peat moss, perlite, nutrients, gypsum, and dolomitic lime. Mix seeds with medium and surface sow.(12) |
| Establishment Phase (from seeding to germination): | **For *G. elliptica*:** Mist and water using an automatic irrigation system. Seeds germinate in 14 days.(12) |
| Length of Establishment | Seed may take 2 or more years to germinate.(8) |

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| Phase: | **For *G. elliptica*:** Seeds germinate in 14 days.(12) |
| Active Growth Phase (from germination until plants are no longer actively growing): | Prick out seedlings into individual pots when large enough to handle.(8)<br><br>**For *G. elliptica*:** Transplant 14 days after germination in Deepot 16 containers filled with standard potting mix.(12) |
| Length of Active Growth Phase: | |
| Hardening Phase (from end of active growth phase to end of growing season; primarily related to the development of cold-hardiness and preparation for winter): | One protocol recommends growing seedlings in a greenhouse the first winter.(8) |
| Length of Hardening Phase: | |
| Harvesting, Storage and Shipping (of seedlings): | |
| Length of Storage (of seedlings, between nursery and outplanting): | |
| Guidelines for | One protocol recommends planting *G. fremontii* into their permanent sites after |

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| Outplanting / Performance on Typical Sites (e.g., percent survival, height or diameter growth, elapsed time before flowering): | the last frosts, in late spring or early summer.(8) |
| Other Comments (including collection restrictions or guidelines, if available): | **The following information applies to Desert Lands ecological restoration types (including some relevant chaparral ecosystems) and might not apply to *G. fremontii*.**<br><br>Desert plants such as *G. fremontii* widely need porous, rapidly draining soil mixes in the nursery and benefit from inoculation with appropriate vesicular arbuscular mycorrhizal fungi. Many such plants would benefit from propagation in taller pots than are generally used, to develop a deep rooting system to protect plants from drought.<br><br>Direct seeding is less effective than growing in a nursery. Use comparable microhabitats to decide spacing; desert plants should be spaced widely.<br><br>To establish desert plants, fertilizer and water might be needed; polyacrylamide polymers may help.(10) |
| INFORMATION SOURCES | |
| References (full citations): | 1. American Horticultural Society and Toogood, A. R. 1999. *Plant propagation*. New York, DK Pub. Print.<br><br>2. Beidleman, L. H. and Kozloff, E. N. 2003. *Plants of the San Francisco Bay region: Mendocino to Monterey*. Berkeley, CA: University of California Press. Print.<br><br>3. Charters, Michael L. Sept. 1, 2009. Home page of California Plant Names. Latin and Greek Meanings and Derivations. Sierra Madre, CA. http://www.calflora.net/botanicalnames/pageF.html.<br><br>4. Consortium of California Herbaria. May 2012. "County-Level Distribution Results." University and Jepson Herbaria of the University of California at Berkeley. © by the Regents of the University of California. http://ucjeps.berkeley.edu/cgi-bin/get_smasch_county.pl?taxon_id=26464. |

5. Eastwood, Alice. Dec. 1903. "Notes on Garrya with descriptions of new species and key." *Botanical Gazette*. Vol. 36, No. 6. pp. 456-463. Chicago, Ill: University of Chicago Press. http://www.jstor.org/stable/2466038.

6. Everett, Percy C. Bart C. Obrien (editor). Feb. 29, 2012. A second summary of the horticulture and propagation of California native plants at the Rancho Santa Ana Botanic Garden, 1950–1970. Published by Rancho Santa Ana Botanic Garden. Claremont, CA. http://www.rsabg.org/documents/research/everett_1_1.pdf.

7. Eyre, F. H. 1980. *Forest Cover Types of the United States and Canada*. Washington, D.C.: Society of American Foresters.

8. Fern, Ken. 1996–2012. "*Garrya fremontii* – Torr." Plants For A Future Database. England and Wales. http://www.pfaf.org/user/Plant.aspx?LatinName=Garrya+fremontii.

9. Giblin, David. 2012. *"Garrya fremontii."* University of Washington Herbarium, Burke Museum of Natural History and Culture. Seattle, WA. http://biology.burke.washington.edu/herbarium/imagecollection.php.

10. Harker, Donald F. 1999. *Landscape Restoration Handbook*. Boca Raton, FL: Lewis Publishers. Print.

11. Hitchcock, C. L., & Cronquist, A. 1973. *Flora of the Pacific Northwest; an illustrated manual*. Seattle, WA: University of Washington Press. Print.

12. Howard, Janet L. 1992. "Garrya fremontii." *In* Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). http://www.fs.fed.us/database/feis/plants/shrub/garfre/introductory.html.

13. Huxley, A. J., and Griffiths, M. 1999. *The new Royal Horticultural Society dictionary of gardening*. New York: Grove's Dictionaries Inc.

14. Kruckeberg, A. R. 1996. *Gardening with native plants of the Pacific Northwest*. Seattle, WA: University of Washington Press. Print.

15. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. Arlington, VA: NatureServe. http://www.natureserve.org/explorer.

16. Reveal, James L. No date. "David Douglas (1799 1834). *From Discovering Lewis & Clark*. Washburn, ND: The Lewis and Clark Fort Mandan Foundation. http://lewis-clark.org/content/content-article.asp?ArticleID=487.

17. Sawyer, J. O., Keeler-Wolf, T., and Evens, J. 2009.*A manual of California vegetation*. Sacramento, Calif, California Native Plant Society Press. Print.

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| | 18. Schopmeyer, C S. 1974. *Seeds of Woody Plants in the United States*. Washington: Forest Service, U.S. Dept. of Agriculture. Print.<br><br>19. Shepperd, Wayne D. "Garrya Dougl. Ex. Lindl: silktassel." *In* Bonner, F. T., and Karrfalt, R. P. 2008. *The woody plant seed manual*. [Washington, D.C.], U.S. Dept. of Agricultural Handbook 727, Forest Service. http://permanent.access.gpo.gov/LPS113557/LPS113557/www.nsl.fs.fed.us/F&G%20genera.pdf.<br><br>20. Spurr, Joy, ed. 2003. *Cuttings through the year*. Arboretum Foundation, Washington Park Arboretum. Seattle, WA. Print.<br><br>21. The Calflora Database: a nonprofit organization. 2012. Berkeley, CA: Calflora: Information on California plants for education, research and conservation, based on data contributed by dozens of public and private institutions and individuals, including the Consortium of Calif. Herbaria [web application]. http://www.calflora.org.<br><br>22. USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. URL: http://www.ars-grin.gov/cgi-bin/npgs/html/genusfamfind.pl.<br><br>23. USDA, NRCS. The PLANTS Database. National Plant Data Team, Greensboro, NC 27401-4901 USA. http://plants.usda.gov/java/nameSearch?keywordquery=garrya+fremontii&mode=sciname&submit.x=0&submit.y=0.<br><br>24. Washington Department of Natural Resources. July 2011. "Washington Natural Heritage Program Watch List of Vascular Plants." Olympia, WA. http://www1.dnr.wa.gov/nhp/refdesk/lists/watch.html.<br><br>25. Young, Betty. 2001. "Propagation protocol for production of container *Garrya elliptica* Dougl. ex Lindl. plants (Deepot 40)"; San Francisco, CA. *In* Native Plant Network. Moscow, ID: University of Idaho, College of Natural Resources, Forest Research Nursery. http://www.nativeplantnetwork.org/Network/ViewProtocols.aspx?ProtocolID=609.<br><br>26. Young, J. A., and Young, C. G. 1992. *Seeds of woody plants in North America*. Portland, OR: Dioscorides Press. Print. |
| Other Sources Consulted (but that contained no pertinent information) | Barbour, Michael G, and W D. Billings. *North American Terrestrial Vegetation*. Cambridge [Cambridgeshire: Cambridge University Press, 1988. Print.<br><br>Baskin, Carol C, and Jerry M. Baskin. *Seeds: Ecology, Biogeography, and* |

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| (full citations): | *Evolution of Dormancy and Germination*. San Diego, Calif: Academic Press, 1998. Print. P 345.<br><br>Brown, James K.; Smith, Jane Kapler 2000. Wildland fire in ecosystems: effects of fire on flora. Gen. Tech. Rep. RMRS-GTR-42-vol. 2. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 257 p. http://www.treesearch.fs.fed.us/pubs/4554.<br><br>Brown, James K.; Smith, Jane Kapler, eds. 2000. Wildland fire in ecosystems: effects of fire on flora. Gen. Tech. Rep. RMRS-GTR-42-vol. 2. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 257 p. http://www.fs.fed.us/rm/pubs/rmrs_gtr042_2.pdf.<br><br>Callahan, Frank. Plant of the Year: California Buckeye (Aesculus californica (Spach) Nutt.) pp. 10-15. Kalmiopsis Volume 12, 2005. http://npsoregon.org/kalmiopsis/kalmiopsis12/buckeye.pdf<br><br>Department of Horticulture. Landscape Plants, Images, identification, and information. Oregon State University. Copyright ©, Oregon State University, 1999-2012.<br><br>Dirr, Michael. *Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses*. Champaign, Ill: Stipes Pub, 1998. Print.<br><br>Franklin, Jerry F, and C T. Dyrness. *Natural Vegetation of Oregon and Washington*. Portland, Or: Pacific Northwest Forest and Range Experiment Station, Forest Service, U.S. Dept. of Agriculture. 1973. Print.<br><br>Leigh, Michael. *Grow Your Own Native Landscape: A Guide to Identifying, Propagating & Landscaping with Western Washington Native Plants*. Olympia, Wash: Native Plant Salvage Project, Washington State University Cooperative Extension, Thurston County, 1999. Print.<br><br>McDonald, Philip M.; Fiddler, Gary O. 1995. Development of a mixed shrub-ponderosa pine community in a natural and treated condition. Res. Paper PSW-RP-224-Web. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 18 p.<br><br>McVicar, Jekka. *Seeds: The Ultimate Guide to Growing Successfully from Seed; Special Photography by Marianne Majerus*. Vancouver: Whitecap, 2001. Print.<br><br>Oregon Flora Project. Dept. Botany & Plant Pathology, Oregon State University. Corvallis, OR 97331-2902. http://www.oregonflora.org/.<br><br>Rocchio, Joe and Rex Crawford, compilers. Field Guide to Washington's Ecological Systems. DRAFT - March 5, 2008. Washington Natural Heritage |

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| | Program Asset Management & Protection Division. Washington Department of Natural Resources. Olympia, WA. 10/28/2009.<br><br>Rose, Robin, Caryn E. C. Chachulski, and Diane L. Haase. *Propagation of Pacific Northwest Native Plants*. Corvallis: Oregon State University Press, 1998. Print.<br><br>Wall, Michael and John MacDonald. Processing Seeds of Native California Plants for Conservation, Storage, and Restoration. Rancho Santa Ana Botanic Garden (http://www.rsabg.org). Claremont, CA. http://www.hazmac.biz/Seed%20Processing/2009S.pdf. |
| Protocol Author (First and last name): | Cynthia Riskin |
| Date Protocol Created or Updated (MM/DD/YY): | 06/08/12 |

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