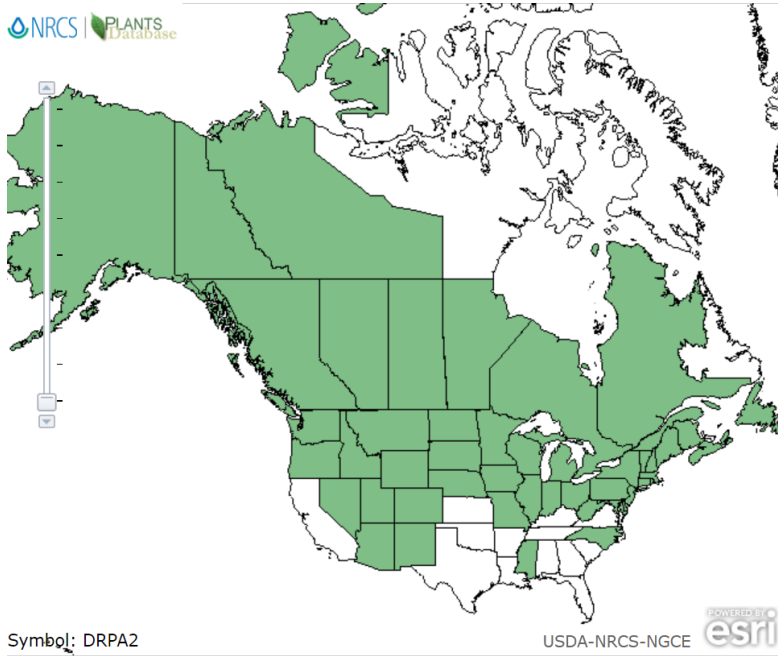


Plant Propagation Protocol for *Dracocephalum parviflorum* (Nutt.)

ESRM 412 – Native Plant Production

Protocol URL: <https://courses.washington.edu/esrm412/protocols//DRPA2.pdf>



TAXONOMY

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| Plant Family | |
| Scientific Name | Lamiaceae/ Labiatae |
| Common Name | Mint Family |
| Species Scientific Name | |
| Scientific Name | <i>Dracocephalum L.</i> <i>Dracocephalum parviflorum</i> (Nutt.) |
| Varieties | There are no recognized varieties. |
| Sub-species | There are no recognized subspecies. |
| Cultivar | Not Available |
| Common Synonym(s) | <i>Moldavica parviflora</i> (Nutt.) Britton |
| Common Name(s) | American Dragonhead False Dragonhead Dragonhead Dragon's Head Dragonhead Mint |
| Species Code (as per USDA Plants database) | DRPA2 |

| GENERAL INFORMATION | |
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| Geographical range | Existent in King, Chelan, Okanogan, Ferry, Spokane, and Asotin County in Washington State. Present in Union and Lake County in Oregon. However, the plant also grows in most parts of North America except in some states along the southern U.S. border. ³ |
| Ecological distribution | Rocky/gravelly calcareous soils and in disturbed areas. ⁵ |
| Climate and elevation range | Moist Climate ³ from 500 to 10,000 feet (1,360-3,000 m). ² |
| Local habitat and abundance | <p>American dragonhead grows in open, moist sites and in disturbed areas. In the Great Plains the plant grows on “gravelly soils along streams, in open woodlands, or on moist wooded hillsides. In the Northeast, American dragonhead is found on rocky or gravelly calcareous soils in recently cleared areas”.²</p> <p>Species commonly associated with American dragonhead are “russet buffaloberry (<i>Shepherdia canadensis</i>), Oregon-grape (<i>Mahonia repens</i>), snowberry (<i>Symphoricarpos</i> spp.), serviceberry (<i>Amelanchier</i> spp.), western yarrow (<i>Achillea millefolium</i>), strawberry (<i>Fragaria</i> spp.), heartleaf arnica (<i>Arnica cordifolia</i>), fireweed (<i>Chamerion angustifolium</i>), Bicknell geranium (<i>Geranium bicknellii</i>), and wild hollyhock (<i>Iliamna rivularis</i>).”²</p> |
| Plant strategy type / successional stage | Early successional after disturbance. The American dragonhead usually disappears or declines in population within the first few years after the disturbance. ² |
| Plant characteristics | American dragonhead is an annual or biennial forb. It is also a seed banking species, thus it’s seeds are not wind-dispersed and are large in size. Buried seeds can stay functional and grow after a long period of time. ² |
| PROPAGATION DETAILS | |
| Ecotype | |
| Propagation Goal | Plants |
| Propagation Method | Seed Propagation |
| Product Type | Seeds |
| Stock Type | Not Available |
| Time to Grow | 5 months until first flowering |
| Target Specifications | 1.5-2.0 feet tall, serrated leaves, flowering |
| Propagule Collection Instructions | Collect produced seeds from flowering plants around September. |
| Propagule Processing/Propagule Characteristics | Not Available |

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| Pre-Planting Propagule Treatments | Seeds are known to be dominate for years in dry conditions. A hot water soak can assist in scarification. Acid scarification was proved to be less successful. Heat & smoke stimulation increases germination rates. ⁴ |
| Growing Area Preparation / Annual Practices for Perennial Crops | Disturbed soils are the ideal media for plants. Many wild American Dragonhead plants naturally grow in gravelly conditions. Seeds need large surface area and deep ground volume due to taproot features. ³ |
| Establishment Phase Details | Seedlings will grow and develop taproots. Leaves are serrated and flowers are crowded in a dense terminal or axillary cluster. ⁵ |
| Length of Establishment Phase | Seedlings take about 5 months (May – September) to grow until they are ready to germinate. ³ |
| Active Growth Phase | Plants stop growing and germinating after 2 years, reaching maximum height (around 2.5 feet) ² |
| Length of Active Growth Phase | Dracocephalum parviflorum is a biennial plant. It takes around two years to complete its life cycle. ² |
| Hardening Phase | Not Available |
| Length of Hardening Phase | Not Available |
| Harvesting, Storage and Shipping | Store seedlings in moist conditions with low sunlight. |
| Length of Storage | 2 months |
| Guidelines for Outplanting / Performance on Typical Sites | 63% germination with a hot water soak scarification. |
| Other Comments | Wild seedlings remain dormant in the soil until the next stand-replacing fire or other disturbance occurs. ² |

INFORMATION SOURCES

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| References | <p>(1) “Dracocephalum Parviflorum Nutt. American Dragonhead.” <i>Plants Profile for Dracocephalum Parviflorum (American Dragonhead)</i>, 2019, plants.sc.egov.usda.gov/core/profile?symbol=DRPA2.</p> <p>(2) Matthews, Robbin F. “Dracocephalum Parviflorum.” <i>Dracocephalum Parviflorum</i>, 1993, www.fs.fed.us/database/feis/plants/forb/drapar/all.html.</p> <p>(3) Giblin, David. “Dracocephalum Parviflorum.” <i>Burke Herbarium Image Collection</i>, 2015, biology.burke.washington.edu/herbarium/imagecollection/taxon.php?Taxon=Dracocephalum+parviflorum.</p> <p>(4) Veldhuizen, Bob Van, and Charlie Knight. <i>Dragonhead Mint (Dracocephalum Parviflorum Nutt.) as a Potential Agronomic Crop</i></p> |
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| | <p>for Alaska. 2006, www.uaf.edu/files/snre/MP_06_01.pdf.</p> <p>(5) “Dracocephalum Parviflorum.” <i>Encyclopedia of Puget Sound</i>, www.eopugetsound.org/species/dracocephalum-parviflorum.</p> |
| Other Sources Consulted | <p>(6) “Dracocephalum Parviflorum - Nutt.” <i>Pfaf Plant Search</i>, pfaf.org/user/Plant.aspx?LatinName=Dracocephalum%2Bparviflorum.</p> <p>(7) “Dracocephalum Parviflorum (American Dragonhead).” <i>Minnesota Wildflowers</i>, www.minnesotawildflowers.info/flower/american-dragonhead.</p> <p>(8) <i>SEINet Portal Network - Dracocephalum Parviflorum</i>, swbiodiversity.org/seinet/taxa/index.php?taxon=906.</p> <p>(9) “Plant Database.” <i>Lady Bird Johnson Wildflower Center - The University of Texas at Austin</i>, www.wildflower.org/plants/result.php?id_plant=DRPA2.</p> <p>(10) <i>ITIS Standard Report Page: Dracocephalum Parviflorum</i>, www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=32490#null.</p> |
| Protocol Author | RheanalyN Sta. Maria |
| Date Protocol Created or Updated | 05/01/19 |