

**Plant Propagation Protocol for *Mertensia longiflora***  
 ESRM 412 – Native Plant Production



Photo by Terry Lillybridg



Photo from <http://web.ewu.edu/ewflora/Boraginaceae/Mertensia%20longiflora.htm>

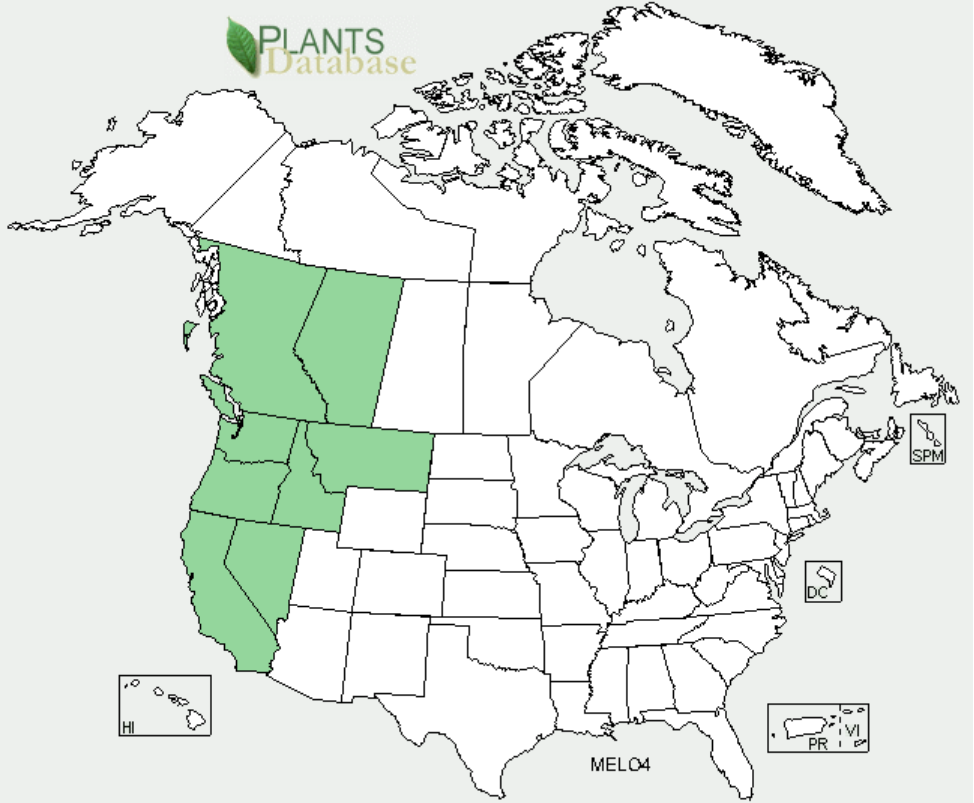
**TAXONOMY**

<b>Family Names</b>	
Family Scientific Name:	Boraginaceae
Family Common Name:	Forget-me-not family
<b>Scientific Names</b>	
Genus:	Mertensia
Species:	Longiflora
Species Authority:	Greene
Variety:	
Sub-species:	
Cultivar:	
Authority for Variety/Sub-species:	
Common Synonym(s)	Sometimes listed incorrectly as a synonym for <i>Mertensia oblongifolia</i> (Douglas)
Common	Small bluebells, trumpet lungwort, sagebrush bluebells, long-flowered

Name(s):	lungwort, trumpet bluebells
Species Code (as per USDA Plants database):	MELO4

**GENERAL INFORMATION**

Geographical range  
(distribution maps for  
North  
America and  
Washington  
state)



	Pictures from <a href="http://plants.usda.gov">http://plants.usda.gov</a>
Ecological distribution (ecosystems it occurs in, etc):	Open woods, rocky slopes, dry to mesic grasslands and shrublands with moist springs that dry later in the year.(Horner) Found especially near sagebrush or in sparse ponderosa pine forests.(Baldwin)
Climate and elevation range	Moderate high elevation and foothills, generally 1500 – 2200 meters though this varies across its range.(Baldwin)
Local habitat and abundance; may include commonly associated species	Often found with <i>Juniperus occidentalis</i> (Dealy) and sagebrush (Baldwin).
Plant strategy type / successional stage (stress-tolerator, competitor, weedy/colonizer, seral, late successional)	
Plant characteristics	Perennial herb from shallow, nearly black, papery tuber-like root. Flowers April through June. (Baldwin)(Clark) Stems are generally 15 - 20 cm (Douglas) Basal leaves are rare on flowering plants and if present are broadly elliptic, rounded blades. There are few stem leaves, with those near the bottom very reduced, increasing in size to 2-6cm long and .5 – 3cm wide. (Douglas) “Inflorescence compact, somewhat head like; corollas tubular funnel-shaped, blue, 15-25 mm long; petals fused at base into a tube that flares slightly at top to the funnel-shaped limb and 5 lobes, the tube 2-3 times as long as the limb, and glabrous within but with 5 bulges at the throat”(Douglas) Flowers pink when first budding. (Griffith) Produces 4 clustered wrinkled nutlets.(Douglas)

### PROPAGATION DETAILS

Ecotype	
Propagation Goal	
Propagation Method	
Product Type	
Stock Type:	
Time to Grow	
Target	

Specifications	
Propagule	
Propagule Processing/Propagule Characteristics:	
Pre-Planting Propagule: Treatments	Since <i>M longiflora</i> is primarily an alpine species cold stratification may assist in germination though no tests have been done.(Hills)
Growing Area Preparation / Annual Practices for Perennial Crops:	
Establishment Phase:	
Length of Establishment Phase:	
Active Growth Phase:	
Length of Active Growth Phase:	
Hardening Phase:	
Length of Hardening Phase:	
Harvesting, Storage and Shipping:	
Length of Storage:	
Guidelines for Outplanting / Performance on Typical Sites:	Hardy in USDA zone 6 & 7, though at higher range of elevations stems are as short as 5 cm, increasing to 20 cm in lower elevations. (Clark) Generally does not flower or stem in first year of growth, instead forming a number of broad rounded basal leaves with petioles. When flowering, the leaves are without petioles and attached alternately to the flower stem.(Clark) Dies back to soil level in winter.(Griffith)
Other Comments (including collection restrictions or guidelines, if available):	Though no information was found on propagation of this species, there was some small information on related species of <i>Mertensia coventryana</i> , an alpine species being propagated through division of roots or by direct seeding into cold frames. (Hills)

## INFORMATION SOURCES

References:	<p>Baldwin, B. G., et al (eds) (2012). The Jepson Manual: Vascular Plants of California. Second Edition, pp 478, 483. University of California Press.</p> <p>Clark, J. L. (1973). Wild Flowers of British Columbia. Sidney, BC, Canada, Gray's Publishing Limited.</p> <p>Dealy, E. J. (2004) Western Juniper.  <a href="http://www.na.fs.fed.us/pubs/silvics_manual/Volume_1/juniperus/occidentalis.htm">http://www.na.fs.fed.us/pubs/silvics_manual/Volume_1/juniperus/occidentalis.htm</a>, Silvics Manual Volume 1, Department of Agriculture, Forest Service. Retrieved 4/17/2012.</p> <p>Douglas, G. W. et al. (eds.) (1998). Illustrated Flora of British Columbia, Vol 2, pp. 50. Ministry of Environment, Lands and Parks, Ministry of Forests.</p> <p>Hills, D. (1959) The Propagation of Alpines, pp. 1959. London, Faber and Faber Limited.</p> <p>Jepson, W. L. (1951). A Manual of the Flowering Plants of California, pp. 841-842. Berkeley, Los Angeles, CA.</p> <p>Mason, G. (1975). Guide to the Plants of Wallowa Mountains of Northeastern Oregon, pp. 296. Eugene, OR, Museum of Natural History, University of Oregon.</p> <p><a href="http://plants.usda.gov">http://plants.usda.gov</a>, Unites States Department of Agriculture, National Resources Conservation Service. Accessed 4/14/2012.</p>
Other Sources Consulted (but that contained no pertinent information) (full citations):	<p>The Encyclopedia of Life, <a href="http://eol.org/pages/580072/overview">http://eol.org/pages/580072/overview</a>, retrieved 4/17/2012.</p> <p>Griffith, A. (1964). Collins Guide to Alpines and Rock Garden Plants, Revised Edition. Chancellor Press.</p> <p>Hartmann, H. T., Kester, D. E., Geneve, R. (2011). Hartman and Kester's Plant Propagation Principles and Practices. Eighth Edition.</p> <p>Young, C. G., Young, J. A., Collecting, Processing and Germinating Seeds of Wildland Plants. Timberland Press inc.</p> <p>Burk Museum of Natural History and Culture, 2012  <a href="http://biology.burke.washington.edu/herbarium/imagecollection.php?Genus=Mertensia&amp;Species=longiflora">http://biology.burke.washington.edu/herbarium/imagecollection.php?Genus=Mertensia&amp;Species=longiflora</a> retrieved 4/14/2012.</p> <p>The Jepson Project, <a href="http://ucjeps.berkeley.edu/cgi-bin/get_cpn.pl?MELO4">http://ucjeps.berkeley.edu/cgi-bin/get_cpn.pl?MELO4</a></p>

	retrieved 4/17/2012.
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