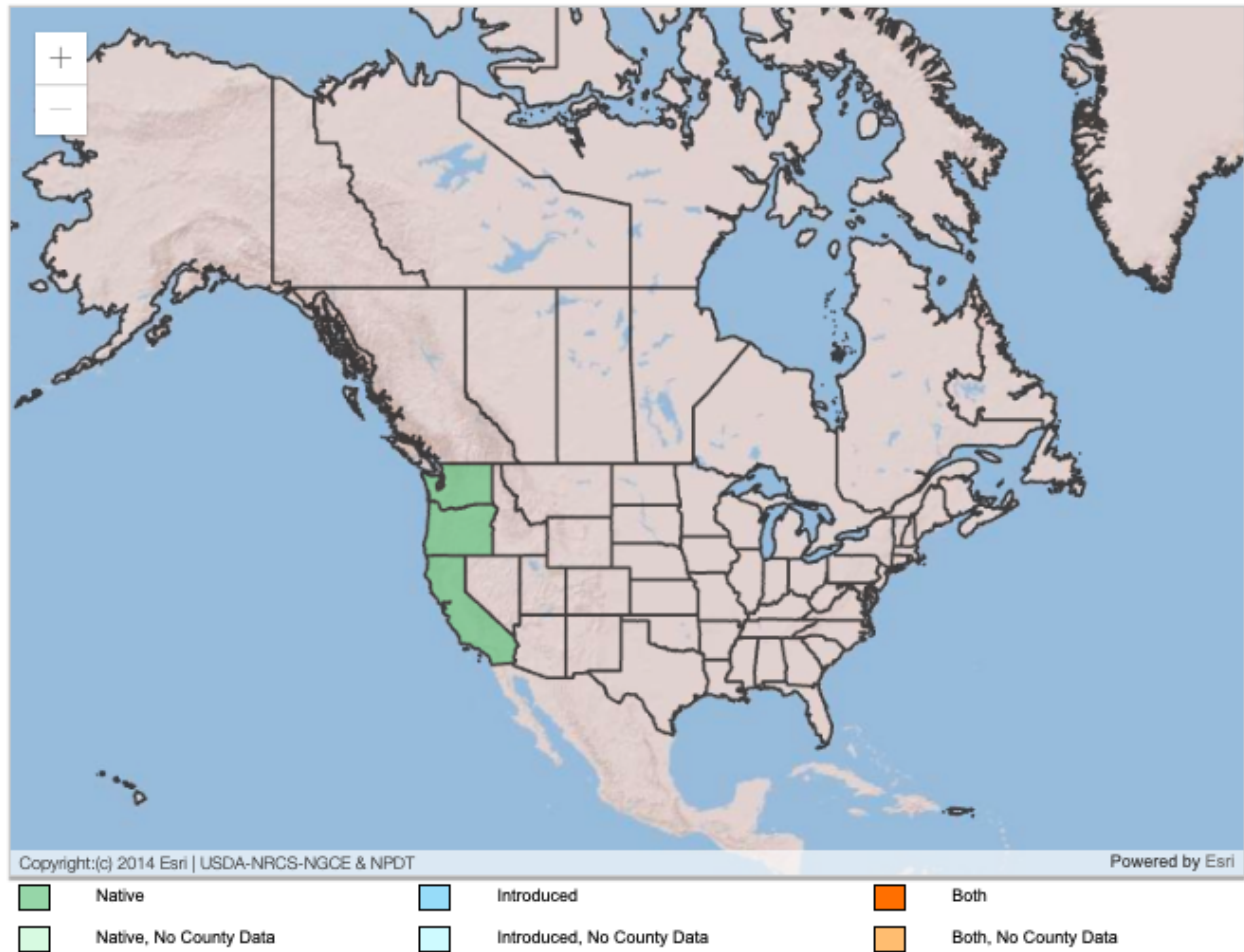


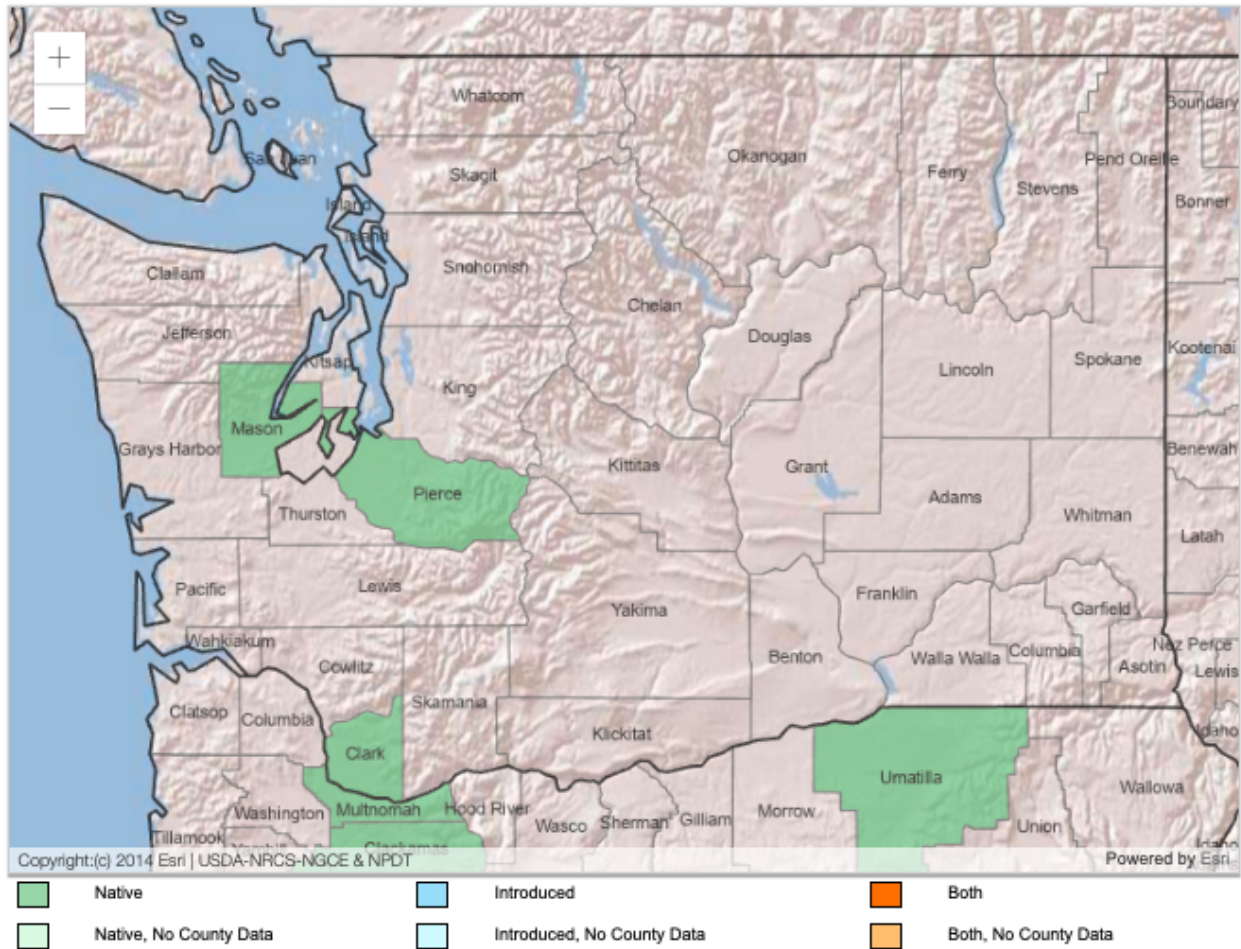
Plant Propagation Protocol from Seed for *Lathyrus torreyi*

ESRM 412 – Native Plant Production

URL: [https://courses.washington.edu/esrm412/protocols/\[2023\]/\[LATO.pdf\]](https://courses.washington.edu/esrm412/protocols/[2023]/[LATO.pdf])



Range in North America Provided by the USDA¹



Range in Washington Provided by the USDA¹

| TAXONOMY | |
|-------------------------|-------------------------|
| Plant Family | |
| Family Scientific Name | Fabaceae Lindl. |
| Family Common Name | Pea |
| Species Scientific Name | |
| Genus | Lathyrus L. |
| Species | <i>Lathyrus torreyi</i> |
| Species authority | A. Gray |
| Varieties | N/A |
| Sub-species | N/A |
| Cultivar | N/A |
| Common Synonym(s) | N/A |
| Common Name(s) | Torrey's Pea |

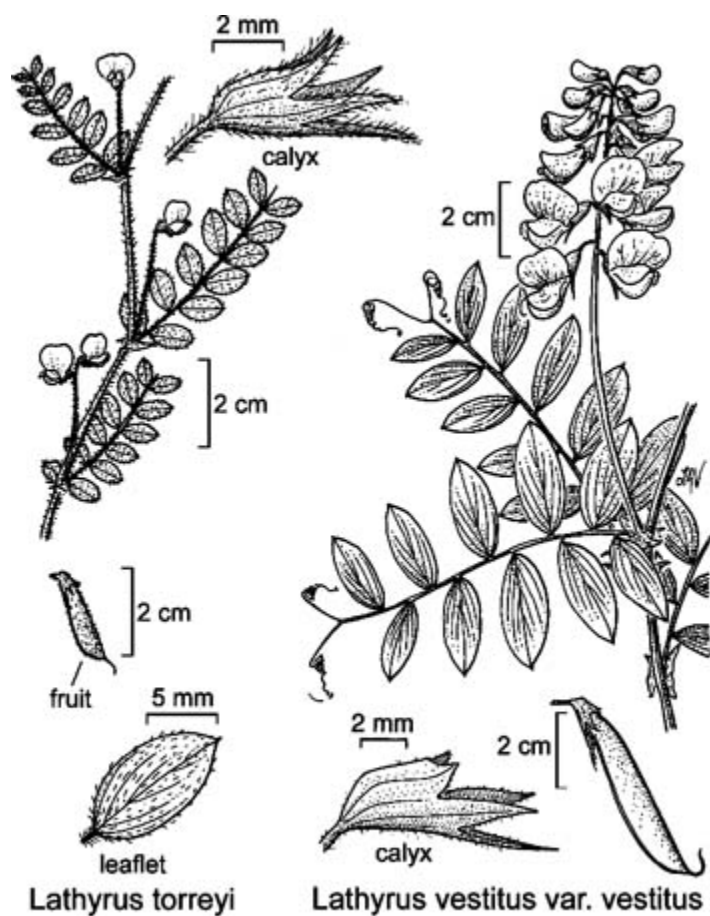
| | |
|--|---|
| Species Code (as per USDA Plants database) | LATO |
| Geographical range | Pierce Co., WA, south to Santa Cruz Co., CA. ² |
| Ecological distribution | Threatened species in Washington Open Woodland Topography is relatively gentle. ² |
| Climate and elevation range | Elevations in WA: 100-600 m (320-2025 ft). ² |
| Local habitat and abundance | Likes open areas, trail edges, and open woods, usually at low-elevation sites dominated by Douglas-fir (<i>Pseudotsuga menziesii</i>) but also reported from lower montane areas dominated by black cottonwood (<i>Populus balsamifera</i> ssp. <i>trichocarpa</i>) and willow (<i>Salix</i> spp.). Other associated species include red alder (<i>Alnus rubra</i>), sword fern (<i>Polystichum munitum</i>), bracken (<i>Pteridium aquilinum</i>), Oregon grape (<i>Berberis nervosa</i>), salal (<i>Gaultheria shallon</i>), blackberry (<i>Rubus ursinus</i> , <i>R. leucodermis</i>), Scot's broom (<i>Cytisus scoparius</i>), clover (<i>Trifolium</i> spp.), and starflower (<i>Trientalis borealis</i> ssp. <i>latifolia</i>). <i>L. torreyi</i> forms dense patches when competition is low, but declines when there is significant cover of other species. ² Clay Loamy Sand 6.1 - 7.8 ph soil ³ Perennial herb, puberulent. ⁴ |
| Plant strategy type / successional stage | Natural disturbances, such as fire and windthrow, probably helped create this species' habitat historically. ² |
| Plant characteristics | General Description: Vining rhizomatous perennial, usually with long, soft hairs throughout. Stem: 0.5-4 dm long, erect to decumbent, slender, angled but not winged. Leaf: leaflets 10-16, paired to scattered, 5-25 (30) mm long, elliptic to obovate with an abruptly pointed tip, tendrils lacking but rachis prolonged as a short bristle. ² |

Floral Characteristics: Flowers 1-2 per raceme, 8-13 mm long. Banner pale lilac to bluish lilac or blue, 10-15 mm long. Wings and keel about equal to the banner; wings pale bluish lilac to nearly white, keel white with a well-recurved tip. Calyx 6-10 mm long, the teeth linear-lanceolate, the lower 3 longer than the tube and nearly half again as long as the upper 2.²

Fruits: Pods 2 cmx4-5 mm, with 4-7 seeds. Identifiable May to July.²

Chromosomes: $2n=14$.⁴

Identification Tips: Distinguished from other *Lathyrus* in its range by the combination of its lack of a winged stem, lack of true tendrils, and only 1-2 flowers per raceme.²



Lathyrus torreyi

Lathyrus vestitus var. *vestitus*

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|---|---|
| | |
| PROPAGATION DETAILS | |
| Ecotype | No Information |
| Propagation Goal | *plants ⁵ |
| Propagation Method | *seed ⁵ |
| Product Type | *Container (plug) ⁵ |
| Time to Grow | *Approximately 5-8 months ⁶ |
| Target Specifications | *Well-developed crowns, roots and rhizomes filling soil profile in container ⁵ |
| Propagule Collection Instructions | *Seeds are collected between July 1st and August 30th. Mature pods are brown. ⁷ |
| Propagule Processing/Propagule Characteristics | No Information |
| Pre-Planting Propagule Treatments | *We have found this plant to be grown with the most success after between 45 and 90 days of exposure to cool/moist stratification in order to break dormancy. ⁸ |
| Growing Area Preparation / Annual Practices for Perennial Crops | *Fully Controlled Greenhouse. Sowing Method: Transplanting Germinants. Seeds are sown in flats containing Sunshine Mix #4 Aggregate Plus (peat moss, perlite, major and minor nutrients, gypsum, and dolomitic lime). Seeds are planted 2 times the diameter to depth. Flats are watered in by hand. Seeds are sown on June 15th. % Germination: 30% ⁵ |
| Establishment Phase Details | *Seeds germinate 15 days after sowing. Seedlings are transplanted 15 days after germination to individual containers (1 gallon cans) containing 1 part standard potting mix of peat moss, fir bark, perlite, and sand and 1 part sand. Transplant Survival averages 60%. ⁵ |
| Length of Establishment Phase | *30 days ⁵ |
| Active Growth Phase | *4 to 5 months ⁸ |
| Length of Active Growth Phase | No Information |
| Hardening Phase | No Information |
| Length of Hardening Phase | No Information |
| Harvesting, Storage and Shipping | No Information |
| Length of Seed Storage | No Information |
| Guidelines for Outplanting / Performance on Typical Sites | *Outplant in the Fall ⁷ |
| Fun Fact | Flowers bloom April to July ⁹ Poisonous ⁹ |

The flowers of the plant appear to mimic the appearance of a hummingbird, one of its pollinators.



2022 Shannon Still

INFORMATION SOURCES

| | |
|----------------------------------|-------------|
| References | See Below |
| Protocol Author | Kyle Costa |
| Date Protocol Created or Updated | 21/May/2023 |

*Based on *Lathyrus Polyphyllus* and *Lathyrus littoralis*, similar species in the same Genus.

¹USDA plants database. (n.d.-a). <https://plants.usda.gov/home/plantProfile?symbol=LATO>

²*Lathyrus torreyi* A. Gray Torrey's Peavine Fabaceae - wa - DNR. (n.d.).
https://www.dnr.wa.gov/publications/amp_nh_lato.pdf

³*Lathyrus torreyi care & growing guide*. Earth&Jungle. (2022, July 4).
<https://www.earthandjungle.com/variety/AWtcXyd9/lathyrus-torreyi>

⁴*Lathyrus torreyi*. (n.d.). https://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=30343

⁵Young, Betty. 2001. Propagation protocol for production of Container (plug) *Lathyrus littoralis* (Nutt. ex.T & G) Endl. plants 1 gallon can; San Francisco, California. In: Native Plant Network.

⁶Willamette National Forest 2011 Native Plant Material Accomplishments." USDA Forest Service. USDA Forest Service.
https://www.fs.usda.gov/wildflowers/Native_Plant_Materials/documents/npmreports/fy2011/R6/18_NatPlant_Rpt_WIL_FY11.pdf

⁷A California Flora and Supplement, Munz, P., University of California Press, Berkeley and London, 1973.

⁸2015. Propagation protocol for production of Container (plug) *Lathyrus polyphyllus* plants USDA NRCS - Corvallis Plant Materials Center Corvallis, Oregon. In: Native Plant Network. URL: <https://NativePlantNetwork.org> (accessed 2023/05/21). US Department of Agriculture, Forest Service, National Center for Reforestation, Nurseries, and Genetic Resources.

⁹*Lathyrus torreyi* calflora. (n.d.). <https://www.calflora.org/app/taxon?crn=4625>

¹⁰Calflora Observation. (n.d.). https://www.calflora.org/entry/occdetail.html?seq_num=io67702