Plant Propagation Protocol for *[L. tenerrima]*
ESRM 412 – Native Plant Production
Protocol URL: https://courses.washington.edu/esrm412/protocols/*[LATE6.pdf]*

TAXONOMY	
Plant Family	Polemoniaceae
Scientific Name	Lathrocasis tenerrima
Common Name	Delicate Gilia
Species Scientific Name	tenerrima
Scientific Name	*Lathrocasis tenerrima* (A. Gary) L.A. Johnson
Varieties	*Gilia tenerrima* (A. Gary)
Sub-species	
Cultivar	
Common Synonym(s)	
Common Name(s)	
Species Code (as per USDA Plants database)	LATE6 (6)
GENERAL INFORMATION	
Geographical range 	Lathrocasis tenerrima is distributed in parts of the Great Basin and Rocky Mountain floristic provinces of western United States. Its range extends north from California, Nevada, Utah, and Colorado into Oregon, Idaho, Wyoming, and Montana and from Wyoming west to the Cascades of Oregon and the Sweetwater Mountains of Mono County, California. Though the type specimen (the original collection the species is named from) is listed as being from "Utah", it was collected in 1869 when the Utah territory included parts of what is now Wyoming, and it most likely was collected in what is now that state (3)
Ecological distribution	Steep, eroding slopes of grasslands, sagebrush steppe, woodlands; valleys. (5)
Climate and elevation range	Mid-elevations (1500-2750 meters) in the Great Basin and Rocky Mountain regions of the Western United States. (3)
Local habitat and abundance	Although several species inhabit the Great Basin region, none is geographically confluent with the entire range of L. tenerrima. It is not known if any Gilia species are truly sympatric with L. tenerrima at the population level. Few herbarium sheets record other Polemoniaceae as associates. The few species listed or observed personally include Collomia linearis Nutt., Ipomopsis aggregate (Prush_) V.E. Grant, Leptosiphon septentrionalis (H. Mason) J.M. Porter & L.A. Johnson, Microsteris gracilis

	(Douglas ex Hook.) E. Greene and Phlox longifolia Nutt. (1)
Plant strategy type / successional stage	Early-arriving species may somehow modify the environment in ways that favor colonization by species that recruit later in the successional sequence. For example, some of the first colonists in succession on crusts of the Colorado Plateau are nitrogen-fixing species, cyanolichens in the genus Collema and epiphytic diazotrophic bacteria associated with M. vaginatus Such species may affect both absolute and relative availabilities of nutrients to microorganisms. Moreover, several cyanobacteria, particularly the predominant M. vaginatus on the Colorado Plateau, tend to arrive long before Collema, and they secrete polysaccharide sheaths that are left behind as dry, fibrous remains as the organisms continue growing. By binding strongly to soil, this sheath material may impose structure and stability on mounds, contribute to changes in crust microtopography, and even affect moisture penetration and retention. (1)
Plant characteristics	Lathrocasis tenerrima is distinguished from other Polemoniaceae by a combination of characters (Johnson and Weese, 2000; Johnson et al., 2004). These include the mostly entire leaves, widely diverging branches with threadlike pedicels that angle 90 degrees or more from the stem, being uniformly covered with short, gland-tipped hairs, minute funnelform flowers with a simple veination pattern, stamens equally inserted approximately mid-tube, one seed in each fruit chamber (three seeds per fruit), and seeds with a warty covering that produces mucilaginous (sticky) threads when wet. (3)
PROPAGATION DETAILS	
Ecotype	Mono County, California (1)
Propagation Goal	Plants
Propagation Method	Seed (1)
Product Type	Container (Plug)
Stock Type	N/A
Time to Grow	6 weeks (1)
Target Specifications	Height: N/A Caliper: N/A

	Root System: Firm plug in container.
Propagule Collection Instructions	Seeds are collected between April and July. Mature flowers are white to lavender. Capsules, spherical, with 1-seeded chambers; seeds ellipsoid, becoming sticky when moistened. (2)(4)
Propagule Processing/Propagule Characteristics	Seed Cleaning: N/A Seed Storage: Room temperature, and kept dry. (1)
Pre-Planting Propagule Treatments	Cold Stratification; 8-10 weeks of moist chilling at 4 degrees Celsius. (1)
Growing Area Preparation / Annual Practices for Perennial Crops	Green-house grown, potting soil typ. (1)
Establishment Phase Details	N/A
Length of Establishment Phase	N/A
Active Growth Phase	6 weeks to produce first flower. (1)
Length of Active Growth Phase	2-4 months (1)
Hardening Phase	Seeds mature approximately 2 weeks following anthesis. Flowering takes place predominantly in June and July, but it can occur from May through September. (1)
Length of Hardening Phase	2-4 months (1)
Harvesting, Storage and Shipping	N/A
Length of Storage	N/A
Guidelines for Outplanting / Performance on Typical Sites	N/A
Other Comments	The presence or absence of light and the application of treatments intended to stimulate refractory seeds did not appear to positively affect germination. (1)
INFORMATION SOURCES	
References	1. George, D.B., D.W. Davidson, K.C. Schliep, and L.J. Patrell-Kim. "MICROTOPOGRAPHY OF MICROBIOTIC CRUSTS ON THE COLORADO PLATEAU, AND DISTRIBUTION OF COMPONENT ORGANISMS." Western North American Naturalist 60: pp. 343-354. Print. 2. "Herbarium Database." Burke Museum, 1 Jan. 2014. Web. 19 May 2014.http://biology.burke.washington .edu/herbarium/collections/results.php?SourcePage

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Other Sources Consulted	1. Baldwin, Bruce G. "Polemoniaceae."The Jepson manual vascular plants of California. 2nd ed. Berkeley, Calif.: University of California Press, 2012. . Print."Propagation 2. Johnson, Leigh, K. Huish, and J. Mark Portert. "SEED SURFACE SCULPTURING AND ITS SYSTEMATIC SIGNIFICANCE IN GILIA (POLEMONIACEAE) AND SEGREGATE GENERA." The University of Chicago, 1 Jan. 2004. Web. 19 May 2014. http://www.rsabg.org/documents/research/mporter/Johnso

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