Plant Propagation Protocol for Dense false gilyflower

ESRM 412 – Native Plant Production

URL: https://courses.washington.edu/esrm412/protocols/2025/ALGI.pdf

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North American Distribution

Sourced from USDA Plants Database

Pacific Northwest Distribution

TAXONOMY	
Plant Family	
Scientific Name	Polemoniaceae
Common Name	Phlox family
Species Scientific Name	
Scientific Name	*Allophyllum gilioides,* (Benth.) A. & V. Grant
Varieties	There are no varieties listed in the USDA plant database. Other sources list the sub-species below as varieties.
Sub-species	*Allophyllum gilioides* (Benth.) A.D. Grant & V.E. Grant ssp. *Gilioides* *Allophyllum gilioides* (Benth.) A.D. Grant & V.E. Grant ssp. *violaceum* (A. Heller) Day
Cultivar	There are no recognized cultivars.
Common Synonym(s)	*Gilia gilioides*, (Benth.) Greene (2)
Common Name(s)	Dense false gillyflower, dense false gilia, purple false gilia
Species Code (as per USDA Plants database)	ALGI
GENERAL INFORMATION	
Geographical range	Native to Washington, Oregon, California, Nevada, Arizona and the southwest corner of Utah. See distribution maps above. (6)
Ecological distribution	Found within mattoral vegetation association of California (2) and interior chaparral, semidesert grasslands, pinyon juniper woodland, and riparian (5).
Climate and elevation range	Ideal elevation range of 3000-5000 feet (5). Tolerates 525-8695 ft (1).
Local habitat and abundance	Open, sandy, generally damp or grassy areas (5). Often found on slopes within yellow pine forests and foothill woodlands (1).
Plant strategy type / successional stage	Low water tolerant (1). Moderate drought tolerance (3).
Plant characteristics	An annual forb or subshrub with hairy stems and alternate leaves with a height of 3-14 inches. Leaf type is simple, with a pinnatifid shape and smooth margins. Small, tubular flowers have a 6-10mm corolla and 5 petals that are 1-3 mm long (11). Flowers grow in elongated clusters of 2-8. They range in color from bright blue to violet and have 1 seed per chamber. The fruit type is capsule and brownish in color. Each capsule contains 1-3 small seeds that are round and black (5).

PROPAGATION DETAILS: FROM SEED	
Ecotype	Protocol not experimentally derived
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Plug
Stock Type	Seed tray (3) or plug (2). Size of plug is not specified, but a medium sized plus of 2-3 inch diameter should provide strong root development.
Time to Grow	10-12 weeks *
Target Specifications	Plants with established roots and several true leaves (3).
Propagule Collection Instructions	Flowers from April till July (1). Collect seeds from mature plants. (3)
Propagule Processing/Propagule Characteristics	Species specific information on seed density and number per pound was not found. *Ipomopsis aggregata*, a species within the same family, has small lightweight seeds with approximately 362,416 seeds per pound (9).
Pre-Planting Propagule Treatments	Ensure seeds are dry. Clean seeds by removing debris by whatever methods are available. Check seeds and remove damaged ones (3) Seeds have physiological dormancy (2).
Growing Area Preparation / Annual Practices for Perennial Crops	Fill containers (seed tray of 2-3 inch diameter plugs) with a light, well-draining medium. For healthier seedlings, plugs are preferred as it prevents potential damage of the roots caused by tangling. (3)
Establishment Phase Details	Sow seeds ¼ inch deep, water gently. Keep seed tray or container plugs in a warm, bright location. Partial sunlight is ideal, avoid intense direct sunlight. Keep medium moist but avoid overwatering (4). Seeds germinate best with day/night temperatures of 27° C/18° C (2)
Length of Establishment Phase	2-4 weeks (4)
Active Growth Phase	Once seedings have developed a few true leaves, you can transplant directing into outplanting site (3). Alternatively, you can move from greenhouse to hoophouse or outdoor yard for a few weeks until outplanting. *
Length of Active Growth Phase	~6-8 weeks*
Hardening Phase	Once seedling is sturdy and has a few true leaves, move from greenhouse into hoophouse or outdoor hard. *

Length of Hardening Phase	Due to short lifespan there is no post-active growth hardening phase. Last few weeks of active growth phase can double as hardening phase. *
Harvesting, Storage and Shipping	As an annual forb/subshrub, storage is not recommended, and shipping distance should be kept to a minimum. *
Length of Storage	Storage past vegetative growth stage is not recommended as plant will flower and go to seed within a short period of time. *
Guidelines for Outplanting / Performance on Typical Sites	The best time for outplanting is early spring. Plant at a depth of 2-3 inches with a spacing of 12-18 inches between other plants to allow for air circulation (4). Exact timing is not documented, but considering the annual growth habit, flowering should occur around 10-12 weeks after sowing with seeds maturing over the next few weeks.
Other Comments	Recommendations marked with * are educated guesses based on the species being an annual forb. Despite extensive research, no sources were found with species specific information on length of active grow phase or recommendations for hardening. It is likely that restoration projects sow seeds directly at outplanting site.
INFORMATION SOURCES	
References	1. Calflora (n.d). *Allophyllum gilioides* https://www.calflora.org/app/taxon?crn=254 2. Baskin, J. M., & Baskin, C. C. (n.d.). *Allophyllum (gilioides).* https://npn.rngr.net/npn/propagation/protocols/polemoniaceae-allophyllum-2065/?searchterm=allophyllum 3. Picture This (n.d.). *How to Propagate Dense false gilyflower?* https://www.picturethisai.com/care/propagate/Allophyllum_gilioides.html 4. Rankel, K. (n.d.). *What is a Allophyllum? Complete Guide.* https://greg.app/allohyllum-overview/ 5. University of Arizona College of Agriculture and Life Sciences (n.d.). *Allophyllum gilioides - dense false gilyflower*. Yavapai County Native & Naturalized Plants. https://cales.arizona.edu/yavapaiplants/SpeciesDetailForb.php?genus=Allophyllum&species=gilioides 6. USDA NRCS (n.d.). *Allophyllum gilioides (Benth.) A.D. Grant & V.E. Grant*. USDA Plant Database. https://plants.usda.gov/plant-profile/ALGI/sources
Other Sources Consulted	7. Oregon State University (n.d.). *Oregon State University Vascular Plant Collection (OSU:V)*. Oregon Flora. https://oregonflora.org/collections/individual/index.php?occid=3008769 8. Raven, P. H., & Axelrod, D. I. (1978). *Origin and Relationships of the California Flora* (Volume 72, p. 52). University of California Publications in Botany. 9. Skinner, D. (n.d.) *Ipomopsis (aggregata)* Native Plant Network — Reforestation, Nurseries and Genetics Resources 10. Smith, C. F. (1998). *A Flora of the Santa Barbara Region, California* (2nd ed., p. 305). Santa Barbara Botanic Garden & Capra Press.

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