

**Plant Propagation Protocol for *Aliciella triodon***

ESRM 412 – Native Plant Production

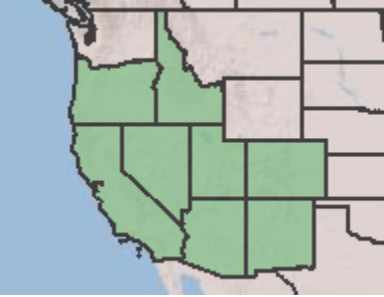

URL: <https://courses.washington.edu/esrm412/protocols/2021/ALTR14.pdf>



Photographed by: Steve Matson, 2011  
(obtained from Calflora.org)

<b>TAXONOMY</b>	
Plant Family	
Scientific Name	Polemoniaceae (11).
Common Name	Phlox Family (11).
Species Scientific Name	
Scientific Name	<i>Aliciella triodon</i> (Eastw.) Brand
Varieties	No varieties are of <i>Aliciella triodon</i> (Eastw.) Brand are officially recognized in the USDA Plants database.
Sub-species	No subspecies of <i>Aliciella triodon</i> (Eastw.) Brand are officially recognized in the USDA Plants database.
Cultivar	
Common Synonym(s)	<i>Gilia triodon</i> Eastw. with species code GITR4 (11).
Common Name(s)	Coyote gilia
Species Code (as per USDA Plants database)	ALTR4

## GENERAL INFORMATION

<p>Geographical range</p>	<p>Within the United States, <i>Aliciella triodon</i> (Eastw.) Brand is found in Arizona, California, Colorado, Idaho, New Mexico, Nevada, Oregon, and Utah (11).</p>  <p>(11). This map shows the states within the U.S where the <i>Aliciella triodon</i> (Eastw.) Brand can be found.</p>  <p>(11). This map offers a more closely dialed-in look at <i>Aliciella triodon</i> (Eastw.) Brand's dispersal in the Pacific Northwest region.</p>
<p>Ecological distribution</p>	<p><i>Aliciella triodon</i> (Eastw.) Brand prefers sandy, rocky, desert ecosystems (2).</p> <p>Found with sage-brush, shadscale, juniper, and pinyon-juniper species (12).</p>
<p>Climate and elevation range</p>	<p>Found in climates associated with desert and low annual (and especially summer season) precipitation (5). The plant can be found from cold hardiness zones of 6b to 8b and in areas with annual precipitation of 6 to 11 inches (10).</p> <p><i>Aliciella triodon</i> (Eastw.) Brand is associated with the elevation range of approximately 1200 to 1700 meters (1).</p>
<p>Local habitat and abundance</p>	<p><i>Aliciella triodon</i> (Eastw.) Brand are found in deserts, as well as scrubs and woodlands (7).</p>

Plant strategy type / successional stage	<p><i>Aliciella triodon</i> (Eastw.) Brand is an annual plant that does well in dry soils and so can handle episodes of drought rather well (7).</p> <p>Coyote gilia also are considered at risk of wildfires (16).</p> <p>There are also concerns about the risk that invasive species and grazing are posing to <i>Aliciella triodon</i> (Eastw.) Brand (13).</p>
Plant characteristics	<p><i>Aliciella triodon</i> (Eastw.) Brand is classified in both the forb and herb categories of growth type, and is an annual plant (11).</p> <p>Coyote gilia plants are dicots (11) that have thin stems, sharp-lobed leaves, with often a single flower at the end (occasionally more than one) (5). The stems aren't often any longer than 13 centimeters in height and can have un-lobed leaves at their base (5). The flowers bloom from April to June (6). The white flowers are used to distinguish between <i>Aliciella triodon</i> and other similar species as they have a more "star-like" shape (12).</p>
<b>PROPAGATION DETAILS</b>	
Ecotype	The seeds can be collected from varying sites, there will be slight differences in temperature and soil regimens. All sites will be dry, sand or rock-based desert-type landscapes (2). The seed collection site should be carefully considered alongside one's intended outplant site.
Propagation Goal	Plants.
Propagation Method	Seed Method.
Product Type	Seed, sown into individual containers.
Stock Type	Seeds.
Time to Grow	Plants must be given ample time to grow, and outplanting would likely be most successful when plants are at or near their full-height considering extensive predation risks (15).
Target Specifications	Extensive stem development. Height at or near 13 centimeters, if less this is okay (5).
Propagule Collection Instructions	Seed collection may be difficult due to varying endangerment status, permission may be necessary in certain states such as California.

	Because flowering ranges from April-June (or in some places April-May) the tail end of this flowering season is when the seeds should be collected (6).
Propagule Processing/Propagule Characteristics	There are 3-12 ovular seeds, 0.6 to 0.9 millimeters in length, that can be collected per locule (12).
Pre-Planting Propagule Treatments	The seeds are rough and not mucilaginous when wet (11). Clean out collected seeds to remove non-seed materials, and air dry the seeds (4).
Growing Area Preparation / Annual Practices for Perennial Crops	Ensure that the soil into which the seed is sown has a pH between 7.2 and 8.4 (10).  The soil should closely mimic the soil sand concentration at the collection site, if possible.  The containers must be at least 20 centimeters in order to avoid root binding, as <i>Aliciella triodon</i> are found in soils with depths of 19 cm minimum (10).
Establishment Phase Details	For Blue field gilies, a similar species of plant to Coyote gilies in habitat and flowering season, 2 weeks of stratification significantly improves germination (3).
Length of Establishment Phase	2 weeks (3).
Active Growth Phase	During active growth protection from extensive grazing and predation risks is likely in the best interest if the nursery setting may leave the plants particularly vulnerable (8).
Length of Active Growth Phase	The growing season for <i>Aliciella triodon</i> (Eastw.) Brand is 4 to 5 months in total (10).
Hardening Phase	The plants must be exposed to temperatures as low as 20 degrees fahrenheit, and conditions that match the hardiness zones of 6b to 8b (10).
Length of Hardening Phase	Will differ based on the seed collection site. Coyote gilia are able to grow in 6b to 8b hardiness zones, this means the December lows are varying (10). This means adjustments may need to be made to the hardening phase conditions and length.
Harvesting, Storage and Shipping	Minimal information exists about storage, but temperatures must be manipulated to mimic seasonal temperature changes and plants must be kept dry such that they will be once outplanted.
Length of Storage	This depends on your intended outplanting date.
Guidelines for Outplanting / Performance on Typical Sites	Attempting to remove invasive/weeds from the particular area chosen for outplanting may be in the best interest as this poses a significant threat to <i>Aliciella triodon</i> (13).
Other Comments	Despite its varying risk statuses, little information exists about propagating Coyote Gilia plants. Because

of this site data, growth data, as well as the propagation recommendations for similar species such as other gilies were looked to when creating this protocol.

### INFORMATION SOURCES

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