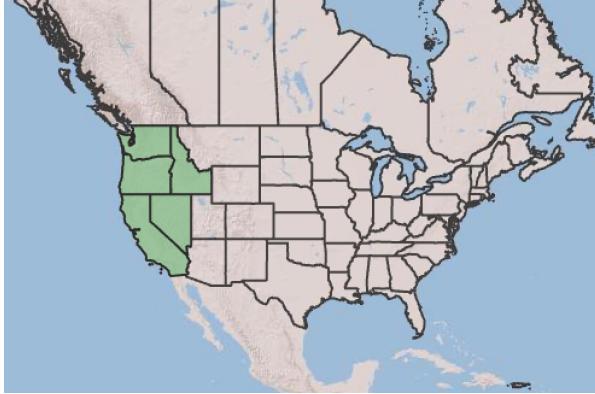


Plant Propagation Protocol for *Allium tolmiei* (Hook.) Baker ex S. Watson

ESRM 412 – Native Plant Production

URL: <https://courses.washington.edu/esrm412/protocols/2026/ALTO.pdf>

North America Distribution



Source: USDA PLANTS Database



Source: Oregonflora.org

TAXONOMY	
Plant Family	
Scientific Name	Amaryllidaceae
Common Name	Onion family
Species Scientific Name	
Scientific Name	<i>Allium tolmiei</i> (Hook.) Baker ex S. Watson
Varieties	
Sub-species	
Cultivar	
Common Synonym(s)	
Common Name(s)	Tolmie's onion
Species Code (as per USDA Plants database)	ALTO
GENERAL INFORMATION	
Geographical range	<i>Allium tolmiei</i> occurs throughout portions of the Pacific Northwest and Intermountain West including Washington, Oregon, Idaho, Nevada, and California (1)(2)(3).
Ecological distribution	Occurs in dry rocky slopes, open forests, sagebrush steppe, grasslands, and montane habitats (2)(3).
Climate and elevation range	Typically found in semi-arid to montane climates from approximately 500–3,000 m elevation. (2)(3)
Local habitat and abundance	Commonly occurs in shallow rocky soils, open ponderosa pine forests, and sagebrush communities. Associated species may include <i>Artemisia</i>

	<i>tridentata</i> , <i>Pseudoroegneria spicata</i> , and <i>Festuca idahoensis</i> (2)(3).
Plant strategy type / successional stage	Adapted to drought-prone and disturbed environments. Functions primarily as a stress-tolerant perennial species in dry ecosystems. (2)(4)
Plant characteristics	Perennial herb that arises from bulbs. Plants produce narrow basal leaves and umbels of pink to lavender flowers (2)(3).
PROPAGATION DETAILS: FROM SEED	
Ecotype	Seed propagation protocols for <i>Allium tolmiei</i> were limited. The recommendations below are inferred from related western North American <i>Allium</i> species such as <i>Allium cernuum</i> , <i>Allium acuminatum</i> , and <i>Allium geyeri</i> .
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container plug
Stock Type	Containerized bulb forming forb
Time to Grow	Approximately 1 growing season to produce transplantable bulbs (5)(6).
Target Specifications	Small well-rooted bulbs with healthy shoots and fibrous root systems (5).
Propagule Collection Instructions	Collect mature seed heads in late summer after capsules dry but before seed dispersal occurs (2)(5).
Propagule Processing/Propagule Characteristics	Seeds should be cleaned by screening and stored under cool dry conditions (5)(6).
Pre-Planting Propagule Treatments	Cold moist stratification for approximately 30–90 days has been recommended for related native <i>Allium</i> species to improve germination (5)(6)(7).
Growing Area Preparation / Annual Practices for Perennial Crops	Use well-drained propagation media containing sand, perlite, and organic matter. Containers should provide good drainage as the bulbs are sensitive to saturated soils (5)(6).
Establishment Phase Details	Sow seeds shallowly and maintain cool moist conditions during germination (5)(6).
Length of Establishment Phase	Germination can occur within several weeks to several months depending on stratification and temperature conditions (5)(6).
Active Growth Phase	Maintain moderate irrigation and high light conditions (5)(6).
Length of Active Growth Phase	About 3-6 months (5)(6).
Hardening Phase	Reduce irrigation and expose plants to outdoor conditions prior to out planting (5).

Length of Hardening Phase	2-4 weeks. (5)
Harvesting, Storage and Shipping	Bulbs and seedlings should be handled carefully to minimize root disturbance (5)(6).
Length of Storage	Short-term refrigerated storage can be possible for dormant bulbs (5).
Guidelines for Out planting / Performance on Typical Sites	Out planting should occur on well-drained rocky or sandy soils in full sun to partial sun (2)(3).
Other Comments	Several propagation recommendations were inferred from related western North American <i>Allium</i> species.
PROPAGATION DETAILS: VEGETATIVE	
Ecotype	
Propagation	Plants
Propagation Method	Vegetative
Product Type	Container plug
Stock Type	Bulb divisions
Time to Grow	One growing season to produce established transplantable plants (8)(9).
Target Specifications	Healthy bulb divisions with active shoots and root systems.
Propagule Collection Instructions	Bulbs should be divided during dormancy after foliage senescence (8)(9).
Propagule Processing/Propagule Characteristics	Bulb offsets should be separated carefully to avoid damaging basal plates and roots (8).
Pre-Planting Propagule Treatments	n/a
Growing Area Preparation / Annual Practices for Perennial Crops	Use well-drained sandy or rocky propagation media as poorly drained soil can cause bulb rot. (8)
Establishment Phase Details	Plant bulb divisions at about two to three times the bulb diameter and maintain moderate moisture during establishment. (8)(9)
Length of Establishment Phase	Several weeks depending on environmental conditions (8).
Active Growth Phase	There should be full sun and moderate irrigation during active growth (8)(9).
Length of Active Growth Phase	One growing season
Hardening Phase	Reduce irrigation and allow plants to acclimate naturally to outdoor seasonal conditions (8).
Length of Hardening Phase	2-4 weeks. (8)
Harvesting, Storage and Shipping	Dormant bulbs can tolerate short-term cool dry storage prior to planting (8)(9).
Length of Storage	Short-term
Guidelines for Outplanting / Performance on Typical Sites	Plant on dry well-drained soils under open sun conditions (2)(3).
Other Comments	

INFORMATION SOURCES	
References	See below
Other Sources Consulted	See below
Protocol Author	Victor Zweig
Date Protocol Created or Updated	05/18/2026

Works Cited

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Other Sources consulted (little to no propagation info.)

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