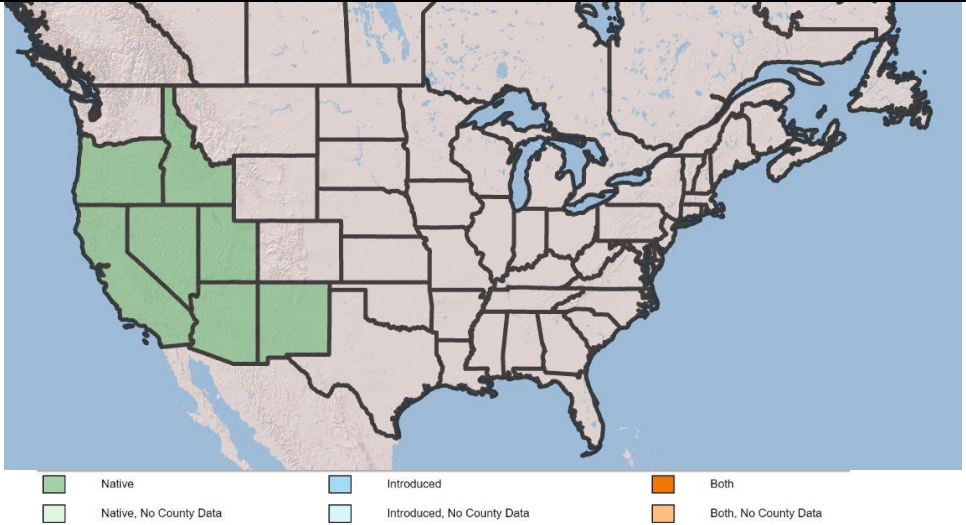
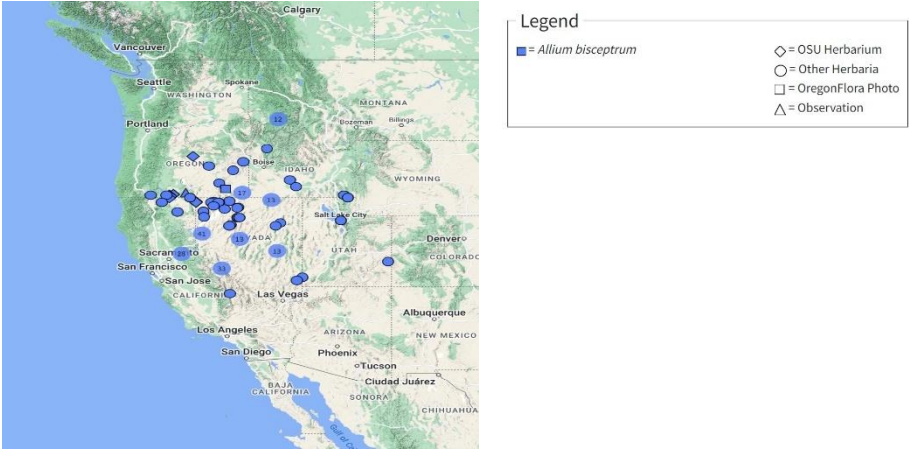
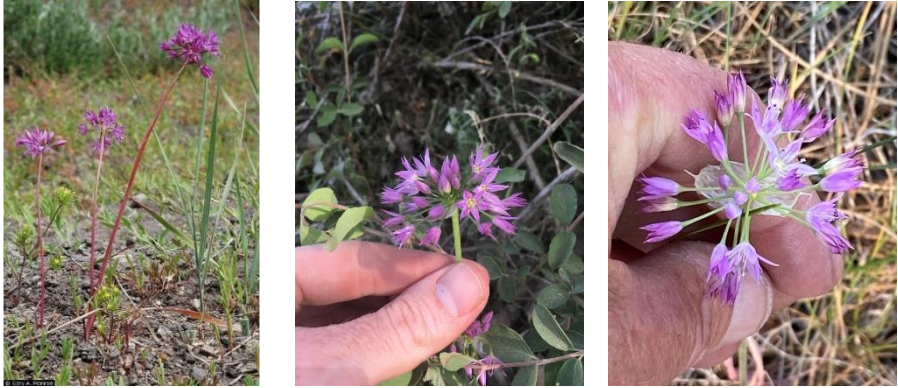


# Plant Propagation Protocol for *Allium bisceptrum*

## ESRM 412 – Native Plant Production

TAXONOMY	
Plant Family	
Scientific Name	Liliaceae
Common Name	Lily family
Species Scientific Name	
Scientific Name	<i>Allium bisceptrum</i> S. Watson
Varieties <sup>1</sup>	<i>Allium bisceptrum</i> var. palmeri, <i>A. bisceptrum</i> var. utahense
Sub-species	None
Cultivar	None
Common Synonym(s)	<i>Allium bisceptrum</i> var. palmeri (S. Watson) A. Cronquist; <i>A. bisceptrum</i> var. utahense M. E. Jones; <i>A. palmeri</i> S. Watson
Common Name(s)	Twincrest onion, aspen onion
Species Code (as per USDA Plants database)	ALBI2
GENERAL INFORMATION	
Geographical range <sup>2,3</sup>	 <p>Twincrest onions have been seen on the east face of the Cascade Mountains and the Sierra Nevada from Klamath County, Oregon, to Inyo County, California,</p>

	and down the Pit River to Shasta County, California. It has also been found in the eastern desert ranges across Nevada, Idaho, and Utah. <i>A. bisceptrum</i> is disjunct from central Idaho to northern Idaho and in eastern Washington. This taxon has also been seen in Franklin County, Washington. <sup>3</sup>
Distribution in Pacific Northwest <sup>7</sup>	
Ecological distribution	Twincrest onion grows in mesic sites in high elevation montane meadows and aspen groves. It is widespread in the Great Basin of Nevada and California and found in Idaho, New Mexico, Utah and Oregon. In Oregon it grows along the Little Owyhee River, at Goose Lake, east of Klamath Lake, and in the Cascades of southern Jackson County. <sup>3</sup>
Climate and elevation range	Generally, Twincrest onions are high-elevation plants found in other regions from 6562 to 9514 ft (2000 to 2900 m). In Washington, this taxon has been found at an elevation of 850 ft (259 m). It can thrive in the cold.
Local habitat and abundance	<i>Allium bisceptrum</i> is found in mixed pine forests or in wetland-riparian habitats. It thrives near streambanks, in aspen groves, or in meadows.
Plant strategy type / successional stage	It is a perennial plant. It thrives in the cold <sup>4</sup> . Plants produce both seeds and bulbs.

Plant characteristics	 <p>Fig. Flowering <i>Allium bisceptrum</i><sup>4</sup></p> <p>A perennial herb measuring up to 10-35 cm long. Stems are scapose, cylindric, sometimes flat or triangular. Leaves are basal, sheathing stem, linear, cylindric, channeled or flat, generally withering from tip by flowering.<sup>5</sup> It produces bulbs or rhizomes, reforming each year, form bulblets at bulb bases or on rhizome. The outer bulb coats are brown, red-brown, yellow-brown, or gray and the inner coats are generally white (pink, red, or yellow). It has a characteristic onion odor and taste.</p>
<b>PROPAGATION DETAILS</b>	
Ecotype	N/A
Propagation Goal	Plants
Propagation Method	Bulbs & Seeds
Product Type	N/A
Stock Type	N/A
<b>Propagation by Seeds</b>	
Time to Grow	Seeds can be planted outdoors in the early fall. They do not need to be warmed throughout the winter. In fact, in warmer winters, the plants may need to be kept at lower temperatures to insure growth and germination. <sup>4</sup>
Target Specifications	N/A
Propagule Collection Instructions	Blooming in late spring to early summer. The flower heads are about 10–15 mm in length. The flowers are varying shades of purple or pink. Each flower head contains six sharply pointed tepals and often a darker stripe. Seeds are collected when the flowers are dried up properly. <sup>4</sup>

Propagule Processing/Propagule Characteristics	Seeds are black, sculpture net-like, smooth, or granular.
Pre-Planting Propagule Treatments	Seeds should be stored in lower temperatures to insure germination and growth of seedlings. <sup>6</sup>
Growing Area Preparation	Twincrest onions prefer a sunny position in a light well-drained soil. The seeds should be planted in closer spacing with around four to five seeds per square foot of soil. Soil must not be drowned with water. It must be kept relatively drained.
<b>Vegetative Propagation (from bulbs and bulblets)</b>	
Time to Grow	Late fall, when the first frost comes, is the best time to plant their bulbs. Plants start to grow from the bulbs in the spring. <sup>4</sup>
Propagule Collection Instructions	Both the bulbs and bulblets of the twincrest onion may be planted. Maturity and flowering may come quicker planting by bulbs than planting by seeds. To do so, bulbs must be picked from the mature wild onion plant. The bulbs are found at least six to eight inches deep in the soil. <sup>8</sup> These bulbs must then be stored in a dry environment (paper bags with dry peat moss is ideal).
Propagule Processing/Propagule Characteristics	The onion bulbs are round and egg-shaped. The bulbs have a light tint and when cut, have a powerful odor.
Pre-Planting Propagule Treatments	Bulbs and bulblets must be stored (paper bags with dry peat moss is ideal) in a dry environment until planting in the late fall or the first frost. <sup>6</sup>
Growing Area Preparation	Twincrest onions prefer a sunny position in light well-drained soil. The bulbs should be planted fairly deeply in acidic potting soil with sand and humus for good drainage. Daughter bulblets may be planted next to mature bulbs to keep the dense pattern. Maintenance must be done in order to make sure these bulbs do not receive too much water.

Establishment Phase Details	The seeds and bulbs start to germinate on their own in the spring time. When germination begins in the spring, water must be administered at least once a week. If it is a dry and rainless week, water should be administered twice that week. Adding a liquid fertilizer may increase growth and vigor.
Length of Establishment Phase	Seeds germinate in the Spring. Seedlings can establish quickly after germination. But, at least three to five years should be expected for the plant to reach a flowering size. Maturity and flowering may come quicker planting by bulbs than planting by seeds. Bulbs must be picked from the mature wild onion plants. <sup>4</sup>
Active Growth Phase	Spring and summer.
Hardening Phase	Unknown
Length of Hardening Phase	Unknown
Harvesting, Storage and Shipping	Seeds and bulbs can be harvested after flowering in the summer. The bulbs should be stored in a dry environment. Paper bags with dry peat moss can be used. Late fall, when the first frost comes, is the best time to plant the bulbs.
Length of Storage	2-3 months
Guidelines for Outplanting /Performance on Typical Sites	Most members of this genus are intolerant of competition from other growing plants. They can grow in the sunlight, but they prefer the shade.
Other Comments	The twincrest onion is still used today by many native Americans including the Nevada Northern Paiute, Gosiute, Northern Ute, and Washoe. The Washoe use the leaves and greens of this plant as a spice and flavor their foods. <sup>2</sup>
Protocol Author	Shubroto Kumar Sarkar
Date Protocol Created or Updated	05/23/2023

### **References**

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