

Protocol Information



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United States Department of Agriculture
Natural Resources Conservation Service

Corvallis

Plant Materials Center

Corvallis, Oregon

Family Scientific Name: **Polygonaceae**

Family Common Name: **Knotweed**

Scientific Name: ***Polygonum davisiae* Brewer ex Gray**

Common Synonym: ***Polygonum newberryi* Small**

Common Name: **Davis's knotweed; Klamath knotweed; fleecflower**

Species Code: **PODA**

Ecotype: **Crater Lake National Park at 5,000 to 7,500 ft elevation.**

General Distribution: **Pacific Northwest to Idaho and California; on open slopes and ridges; well drained soil. Found in abundance on pumice flats at Crater Lake.**

Propagation Goal: **Plants**

Propagation Method: **Vegetative**

Product Type: **Container (plug)**

Stock Type: **1-yr crowns in 6**

Time To Grow: **1 Years**

Target Specifications: **Healthy crowns with feeder roots throughout pots; 1 or more crowns with healthy top growth.**

Propagule Collection: **Large root pieces dug down to 8" deep from pumice flats and stored in moist peat at 3 to 5°C. Seed collection was also attempted; but in some years seed is very scarce; and when seeds were collected, many shriveled during storage / stratification attempts.**

Propagule Processing: **Seed (when available) is large and was easily cleaned with an air screen. Root pieces needed no**

processing.

Pre-Planting Treatments: Not known for seed (see comments above) Root pieces propagated successfully after nearly a year in cold moist storage (3 to 5°C in moist peat / sand). Some of the crown pieces with visible buds were beginning to show signs of sprouting by mid April. Crowns were divided into pieces containing at least one of these visible buds or "eyes".

Growing Area Preparation/

Annual Practices for Perennial Crops: Crown pieces were planted into a soil-less mix containing one part horticultural sand with one part peat / perlite mix, with added 3-month slow-release Osmocote N-P-K fertilizer and Micromax trace elements. Pieces were planted with the "eyes" just at soil level, and pots were kept in a poly greenhouse that was fairly warm (up to 80°F+ on sunny days) and 55 to 65°F night temps.

Establishment Phase: Within 3 weeks, larger root crowns had sprouted; some of the smaller root pieces took longer. No shoots emerged from root pieces planted without visible buds or "eyes". Soil was kept lightly moist during initial growth but was not allowed to become soggy.

Length of Establishment Phase: 3 to 6 weeks.

Active Growth Phase: Crown development continued slowly throughout the summer. Pots were kept in the poly greenhouse which was coated with "white-out" shade compound over the summer. Temperatures occasionally reached around 100°F in the poly house which was left open to cool to ambient night temperatures until early October. Pots were allowed to become fairly dry between waterings once plant growth was established.

Length of Active Growth Phase: 4 months

Hardening Phase: No special steps were taken to harden plants off; most were completely senescent by early November. Crowns die back to soil level at dormancy.

Length of Hardening Phase: ? 4 to 6 weeks

Harvesting, Storage and Shipping: Plants shipped at the end of summer in refrigerated truck up to Crater Lake National Park fared well; although top growth soon died off, healthy crowns remained.

Length of Storage: As noted before, dormant crowns survived nearly a year in cold moist storage.

Outplanting performance on typical sites: **No special needs noted; just be sure to plant so that crown buds are just at soil level; not buried too deeply. The crown will not produce a prolific amount of foliage the first year and may need to be marked off in some way if planted in high-traffic areas.**

Other Comments: **This would be a good candidate species for salvaging prior to construction work - although we did not test the ability of non-propagated crowns to grow in situ.**

The use of manufacturer and trade names in this document is for clarification only. No discrimination is intended and no endorsement is given by the USDA NRCS.

References: **Hitchcock, C.L. and A. Cronquist. 1973. Flora of the Pacific Northwest. University of Washington Press, Seattle, WA.**

Link, Ellen, ed. 1993. Native Plant Propagation Techniques for National Parks Interim Guide; Compiled by Rose Lake Plant Materials Center 7472 Stoll Road East Lansing, MI 48823.

USDA, NRCS. 2001. The PLANTS Database, Version 3.1 (<http://plants.usda.gov>). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

Citation:

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