Plant Propagation Protocol for *Symphoricarpos albus* (L.) S.F. Blake
ESRM 412 – Native Plant Production
Spring 2008

TAXONOMY	
Family Names	
Family Scientific Name:	Caprifoliaceae
Family Common Name:	Honeysuckle
Scientific Names	
Genus:	*Symphoricarpos*
Species:	*Symphoricarpos albus* (L.) S.F. Blake
Species Authority:	(L.) S.F. Blake
Variety:	
Sub-species:	
Cultivar:	
Authority for Variety/Sub-species:	
Common Synonym(s) (may repeat this section multiple times as needed)	
Genus:	
Species:	
Species Authority:	
Variety:	
Sub-species:	
Cultivar:	
Authority for Variety/Sub-species:	
Common Name(s):	Common snowberry, waxberry (Pojar and Mackinnon 1994), white coral berry (Favorite 2002)
Species Code (as per USDA Plants database):	SYAL
GENERAL INFORMATION	
General Distribution (geographical range (states it occurs in), ecosystems, etc):	Snowberry is found in a wide range that encompasses slopes, and bottoms of valleys in the coastal ranges, the Sierra Nevadas and down to California. It also stretches northward to British Columbia and Eastward to Pennsylvania (Favorite 2002).
Climate and elevation range	Grows from low to mid-elevation and encompasses dry to moist areas as well as shaded to open spaces (Klein 2003)
Local habitat and abundance; may include commonly associated species	Habitat includes rocky slopes, forests, thickets, river terraces ravines and along beaches (Pojar and Mackinnon 1994). Often associated with *Holodiscus discolor, Physocarpus malvaceus, Arctostaphylos uva-ursi,*

	Festuca idahoensis, Pinus ponderosa, Pseudotsuga menziesii, Abies lasiocarpa, Crataegus douglasii (Klein 2003).
Plant strategy type / successional stage (stress-tolerator, competitor, weedy/colonizer, seral, late successional)	Considered both climax and seral and can be found in early, mid and late successional stages.
PROPAGATION DETAILS	
Ecotype (this is meant primarily for experimentally derived protocols, and is a description of where the seed that was tested came from):	
Propagation Goal (Options: Plants, Cuttings, Seeds, Bulbs, Somatic Embryos, and/or Other Propagules):	Plant
Propagation Method (Options: Seed or Vegetative):	Seed
Product Type (options: Container (plug), Bareroot (field grown), Plug + (container-field grown hybrids, and/or Propagules (seeds, cuttings, poles, etc.))	Container (plug)
Stock Type:	
Time to Grow (from seeding until plants are ready to be outplanted):	18 months
Target Specifications (size or characteristics of target plants to be produced):	Well established roots and some fruiting and flowering
Propagule Collection (how, when, etc):	Berries should be collected in fall after reaching maturity (Favorite 2002). Berries will be white with 2 seed inside, and the pulp of ripened fruit will be white or clear inside (Majerus 2003). Best if berries are handpicked and stored in a ziplock or nylon bag until processing (Barner 2007). They can be kept for a couple of weeks in these conditions.
Propagule Processing/Propagule Characteristics (including seed density (# per pound), seed longevity, etc):	Most appropriate method is that of macerating the berry and floating the debris off. This is repeated until seeds are left. The seeds can then be dried whether by air or light drying and then refrigerated for storage (Barner 2007).
Pre-Planting Propagule Treatments (cleaning, dormancy treatments, etc):	Snowberry seeds need 45 to 90 days of warm moist stratification followed by a period of chilling for 5-6 months (Majerus 2003). Also suggested is to soak the seeds overnight in freshwater followed by their application to vermiculite in ziplock bags. They can then

	be placed in dark room temperature for 60 days and placed in the refrigerator for 180 days to meet chilling and stratification requirements. Germination progress would then need to be monitored after 120 days (Young 2001).
Growing Area Preparation / Annual Practices for Perennial Crops (growing media, type and size of containers, etc):	Controlled greenhouse where seeds are covered with a media (Young 2001). Greenhouse is especially important for the first winter. Media should include sand and peat (Favorite 2002)
Establishment Phase (from seeding to germination):	Seeds germinate in approximately 240 days and should then be transplanted to individual pots (Young 2001)
Length of Establishment Phase:	240 days
Active Growth Phase (from germination until plants are no longer actively growing):	
Length of Active Growth Phase:	
Hardening Phase (from end of active growth phase to end of growing season; primarily related to the development of cold-hardiness and preparation for winter):	Containers should be moved to a hoop house from the controlled greenhouse that allows for ventilation but no cooling when they are about 2 months old. They can then sit in the hoop house for 2-4 weeks with full sun in summer. After, half of the hoop house should be covered with a shade cloth until temperatures cool in the fall (Majerus 2003).
Length of Hardening Phase:	30-60 days (Majerus 2003)
Harvesting, Storage and Shipping (of seedlings):	Once hardened can be shipped in containers they have been planted in. Bare root is often an effective method of shipping and storing as well (Majerus 2003).
Length of Storage (of seedlings, between nursery and outplanting):	When plant is established and dormant it can be stored as bare root for several weeks in temperatures of 34-37 degree Fahrenheit. Seeds can be stored at 33-38 degrees Fahrenheit (Majerus 2003).
Guidelines for Outplanting / Performance on Typical Sites (eg, percent survival, height or diameter growth, elapsed time before flowering):	Does well in many soil types and various conditions. Prefers clay soils (Favorite 2002). Can live up to 40 years or more and grows to 4-6 feet tall (Klein 2003). 75% survival on some outplantings (Young 2001).
Other Comments (including collection restrictions or guidelines, if available):	Cuttings is often the preferred method to propagate S. albus because of the time and requirements of seed germination (Young 2001). Berries inedible and even considered poisonous. The berries were used the Stl'atl'imx people in small quantities to settle the stomach after especially fatty food (Pojar and Mackinnon 1994). Berries were also rubbed on wounds and used for various ailments and roots were steeped as tea to clear up after birth (Favorite 2002).
INFORMATION SOURCES	

References (full citations):	Favorite, Jammie. 2002. Plant Guide: Snowberry (*Symphoricarpos albus* (L.) Blake). USDA NRCS – National Plant Data Center, Baton Rouge, Louisiana. In:http://www.plants.usda.gov/plantguide/pdf/cs_syal.pdf (accessed 16 April 2008): Davis (CA): Plant Sciences Department. Klein, Kevin. 2003. *Symphoricarpos albus* (common snowberry). In: http://depts.washington.ed u/propplnt/Plants/Symphoricarpos_albus.htm (accessed 15 April 2008): Seattle (WA): Univeristy of Washington, College of Forest Resources. Majerus, Mark E. 2003. Propagation protocol for production of container *Symphoricarpos albus* (L.) Blake plants; USDA NRCS - Bridger Plant Materials Center, Bridger, Montana. In: Native Plant Network. URL: http://www.nativeplantnetwork.org (accessed 16 April 2008). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery. Pojar, Jim and Andy Mackinnon. 1994. Plants of the Pacific Northwest Coast. Vancouver (BC): Lone Pine. Young, Betty. 2001. Propagation protocol for production of container *Symphoricarpos albus* (L.) Blake var. *laevigatus* (Fern) Blake plants (Deepot 40); USDI NPS - Golden Gate National Parks, San Francisco, California. In: Native Plant Network. URL: http://www.nativeplantnetwork.org (accessed 16 April 2008). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.
Other Sources Consulted (but that contained no pertinent information) (full citations):	Baskin, Carol C.; Baskin, Jerry M. 2002. Propagation protocol for production of container *Symphoricarpos albus* (L.) Blake plants; University of Kentucky, Lexington, Kentucky. In: Native Plant Network. URL: http://www.nativeplantnetwork.org (accessed 16 April 2008). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery. Potter, Rachel; Lapp, Joyce; Wick, Dale; Luna, Tara; Evans, Jeff; Hosokawa, Joy; Corey, Susan. 2008. Propagation protocol for vegetative production of container *Symphoricarpos albus* (L.) Blake var.

	laevigatus (Fern) Blake plants (3L containers); USDI NPS - Glacier National Park, West Glacier, Montana. In: Native Plant Network. URL: http://www.nativeplantnetwork.org (accessed 16 April 2008). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery. Scianna, Joe. 2003. Propagation protocol for production of field-grown *Symphoricarpos albus* (L.) Blake plants (2+0 or 3+0 bareroot); USDA NRCS - Bridger Plant Materials Center, Bridger, Montana. In: Native Plant Network. URL: http://www.nativeplantnetwork.org (accessed 16 April 2008). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery. Young, Betty. 2001. Propagation protocol for vegetative production of container *Symphoricarpos albus* (L.) Blake var. *laevigatus* (Fern.) Blake plants (Deepot 40); USDI NPS - Golden Gate National Parks, San Francisco, California. In: Native Plant Network. URL: http://www.nativeplantnetwork.org (accessed 16 April 2008). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.
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