

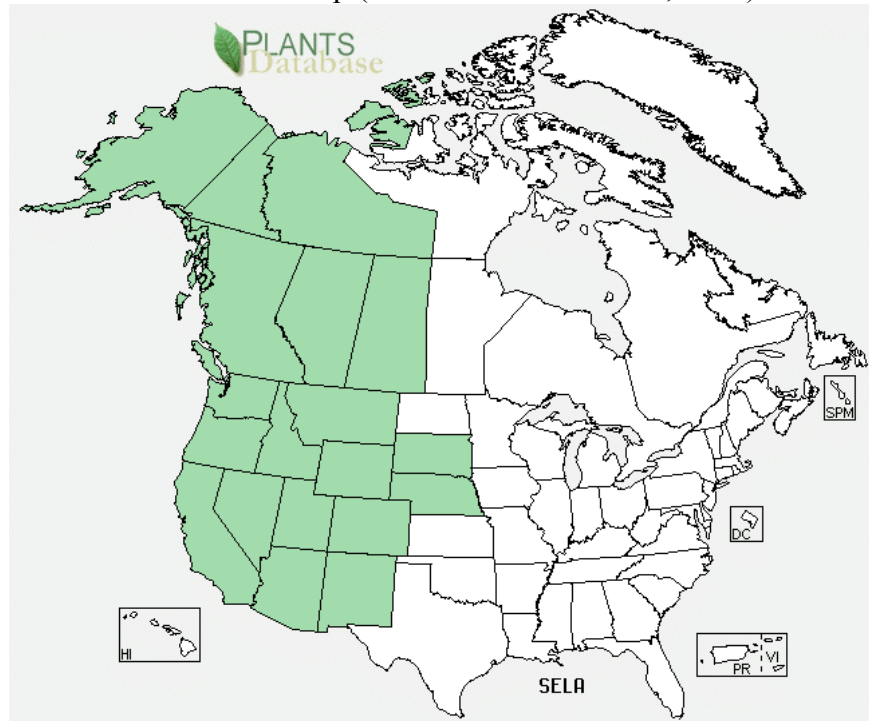
Plant Propagation Protocol for *Sedum lanceolatum*
 ESRM 412 – Native Plant Production
 Spring 2008



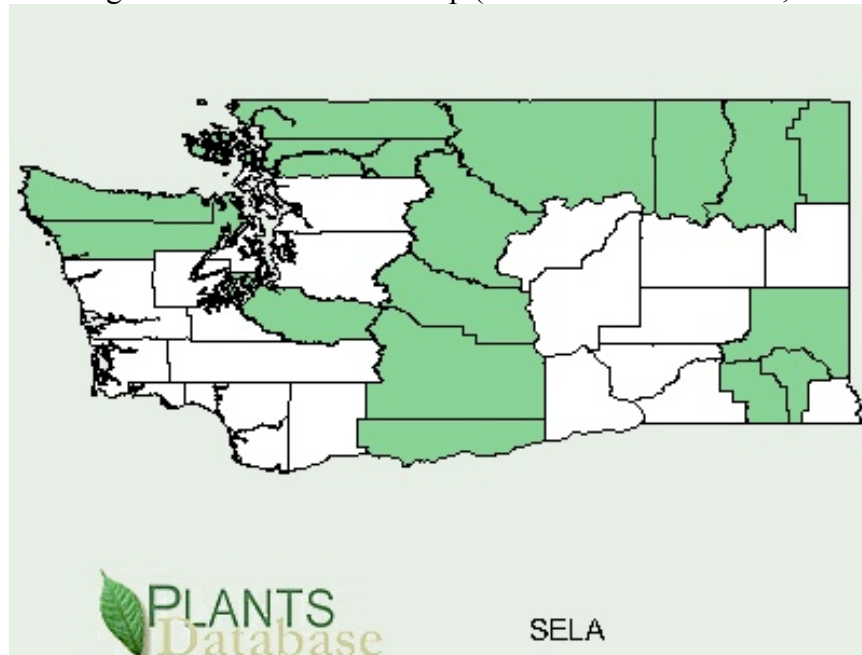
Sedum lanceolatum
 (SW Colorado Wildflowers, 2008)

TAXONOMY	
Family Names	
Family Scientific Name:	Crassulaceae
Family Common Name:	Stonecrop family
Scientific Names	
Genus:	<i>Sedum</i>
Species:	<i>lanceolatum</i>
Species Authority:	Torr.
Common Synonyms:	<i>Sedum lanceolatum</i> Torr. ssp. <i>lanceolatum</i> <i>Sedum lanceolatum</i> Torr. ssp. <i>nesioticum</i> (G.N. Jone) R.T. Clausen <i>Sedum lanceolatum</i> Torr. ssp. <i>subalpinum</i> (Blank.) R.T. Clausen
Common Name(s):	Spearleaf stonecrop Yellow stonecrop
Species Code:	SELA
GENERAL INFORMATION	
Geographical range:	From Alaska south to California and east to New Mexico, Colorado and South Dakota (Klinkenberg, 2007).

National Distribution Map (USDA Plants Database, 2008):



Washington State Distribution Map (USDA Plants Database, 2008):



Ecological distribution:	Rock or gravel soils on coastal bluffs, rock outcrops, and talus slopes (Klinkenberg, 2007).
Climate and elevation range:	Full sun to part sun, sea level to sub-alpine elevations (University of Washington Herbarium, 2008).
Plant characteristics:	Perennial herb, forms mats, several stems 5 – 25 cm tall, succulent. Lower

Plant characteristics:	Perennial herb, forms mats, several stems 5 – 25 cm tall, succulent. Lower leaves form basal rosette, upper leaves deciduous at time of flowering. Leaves are alternate, linear to linear-lanceolate in shape, reddish-green coloring. Flowers have 5 petals, are yellow, sometimes reddish, in a terminal inflorescence (Klinkenberg, 2007)
PROPAGATION DETAILS	
Ecotype:	Subalpine Meadow, 2100 m elevation, Logan Pass, Glacier National Park, Montana (Wick et al, 2008).
Propagation Goal:	Plants (Wick et al, 2008)
Propagation:	Seed (Wick et al, 2008)
Product Type:	Container – plug (Wick et al, 2008)
Stock Type:	160 ml containers (Wick et al, 2008)
Time to Grow:	6 months (Wick et al, 2008)
Target Specifications:	Container seedlings – 4cm height (Wick et al, 2008)
Propagule Collection:	Collect seeds in late August (at high elevations) when fruit turns tan and begins to split open at the top (Wick et al, 2008). As an alternative to seed collection,
Propagule Processing /Propagule Characteristics:	Seeds are classified as non-dormant (Baskin and Baskin, 2002). Longevity and density is unknown (Wick et al, 2008).
Pre-Planting Propagule Treatment:	To clean seeds, use a hammermill, blower and screens (Wick et al, 2008). Wick et al (2008) recommends five months outdoor cold and moist stratification, but states that stratification is not necessary.
Growing Area Preparation / Annual Practices for Perennial Crops:	In an outdoor nursery facility, direct seed in 160 ml late fall and irrigate before winter stratification. Growing medium includes 50% potting mix (6:1:1 sphagnum peat moss, perlite, and vermiculite) and 50% sand. Apply 1 gram of Osmocote controlled release fertilizer and .20 grams Micromax fertilizer per container (Wick et al, 2008).
Establishment Phase:	Seeds germinate uniformly in early spring under varying temperatures. Tree leaves are produced 10 days after germination. After seedling establish, limit irrigation so that they dry out between watering (Wick et al, 2008).
Length of Establishment Phase:	4 weeks (Wick et al, 2008)
Active Growth Phase:	Established seedlings have rapid shoot and root growth 2 to 4 weeks after germination. Biweekly fertilization is recommended using a 20-20-20 liquid fertilizer at 200 ppm (Wick et al, 2008).
Length of Active Growth Phase:	6 weeks (Wick et al, 2008)
Hardening Phase:	Harvest in JulyIn August and September, fertilize with 10-20-20 liquid fertilizer and irrigate one final time before winter (Wick et al, 2008).
Length of Hardening Phase:	4 weeks (Wick et al, 2008).
Harvesting, Storage	Store in outdoor nursery for winter under a layer of insulating foam and

Length of Storage:	5 months
Guidelines for Outplanting / Performance on Typical Sites:	Outplant in high elevation meadows after spring snowmelt. NO survival information provided (Wick et al, 2008).
Other Comments:	As an alternative to seed propagation, cuttings establish readily and are an appropriate means for propagating <i>Sedum spp.</i> Kruckeberg (1984) mentions that the smallest piece of a leaf or stem will take root without much help. Rooting is best done in a sandy medium and will take about a month's time (Pettinger et al, 2002)(Robinson, 2008). Wick et al (2008) suggest using 1,000 ppm IBA Talc and 1:1 sand:perlite growing medium.
INFORMATION SOURCES	
References:	<p>Baskin, C., Baskin, J. 2002. <i>Propagation protocol for production of container Sedum lanceolatum Torr. plants</i>; University of Kentucky, Lexington, Kentucky. Native Plant Network. Accessed 13 May 2008. http://www.nativeplantnetwork.org.</p> <p>Klinkenberg, Brian. 2007. E-Flora BC: Electronic Atlas of the Plants of British Columbia. Lab for Advanced Spatial Analysis, Department of Geography, University of British Columbia, Vancouver. Accessed 14 May 2008. www.eflora.bc.ca.</p> <p>Pettinger, A. And B. Costanzo. 2002. <i>Native Plants in the Coastal Garden</i>. Whitecap, North Vancouver, BC.</p> <p>Robson, K.A., Richter, A., Filbert, M. 2008. <i>Encyclopedia of Northwest Native Plants for Gardens and Landscapes</i>. Timber Press, Portland, OR</p> <p>SW Colorado Wildflowers. Accessed 13 May 2008 http://www.swcoloradowildflowers.com/Yellow%20Enlarged%20Photo%20Pages/amerosedum%20lanceolatum.htm</p> <p>University of Washington Burke Museum Herbarium. "WTU Image Collection: Plants of Washington". Accessed 11 April 2008. http://biology.burke.washington.edu/herbarium/imagecollection.php</p> <p>United States Department of Agriculture. "Plants Database". Accessed 11 May 2008. http://plants.usda.gov/java/profile?symbol=SELA</p> <p>Wick, D., Luna, T., Evans, J. 2008. <i>Propagation protocol for production of container Sedum lanceolatum Torr. plants (160 ml containers)</i>; USDI NPS - Glacier National Park, West Glacier, Montana. Native Plant Network. Accessed 13 May 2008. http://www.nativeplantnetwork.org.</p>
Other Sources	Lady Bird Johnson Wildflower Center. "Native Plant Database". Accessed

Other Sources Consulted:	<p>Lady Bird Johnson Wildflower Center. "Native Plant Database". Accessed 11 May 2008. http://www.wildflower.org/plants/result.php?id_plant=SELA</p> <p>Rose, R., Chachulski, C., Hasse, D. 1998. <i>Propagation of Pacific Northwest Native Plants</i>. Oregon State University Press, Corvallis, OR.</p> <p>Washington Native Plant Society website, accessed 13 May 2008 http://www.wnps.org/landscaping/herbarium/pages/sedum-lanceolatum.html</p> <p>Washington State University Extension. "Native Plants: Identifying, Propagating, and Landscaping". Accessed 30 April 2008, http://gardening.wsu.edu/NWnative/</p>
Protocol Author:	Lisa Ciecko
Date Protocol	05/14/08

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