Plant Propagation Protocol for *Lonicera ciliosa*
ESRM 412 – Native Plant Production
Spring 2008

TAXONOMY	
Family Names	
Family Scientific Name:	*Caprifoliaceae*
Family Common Name:	Honeysuckle family
Scientific Names	
Genus:	*Lonicera*
Species:	*ciliosa*
Species Authority:	(Pursh) Poir. ex DC.
Variety:	n/a
Sub-species:	n/a
Cultivar:	n/a
Authority for Variety/Sub-species:	n/a
Common Synonym(s) (may repeat this section multiple times as needed)	
Genus:	n/a
Species:	n/a
Species Authority:	n/a
Variety:	n/a
Sub-species:	n/a
Cultivar:	n/a
Authority for Variety/Sub-species:	n/a
Common Name(s):	Orange Honeysuckle, Western Orange Honeysuckle
Species Code (as per USDA Plants database):	LOC13
GENERAL INFORMATION	
General Distribution (geographical range (states it occurs in),	British Columbia to Oregon, and east to Montana (1)

ecosystems, etc):	
Climate and elevation range	Low to mid-elevations (sea level to 1000m) (9)
Local habitat and abundance; may include commonly associated species	Open to dense woods, edges of meadows, hillsides, and thickets; commonly grows in dry/moist shade near conifers and or deciduous broadleaf trees, such as big-leaf maple (*Acer macrophyllum*), Douglas-fir (*Pseudotsuga menziesii*), western red cedar (*Thuja plicata*), and or western hemlock (*Tsuga heterophylla*). Commonly grows near/with snowberry (Symphoricarpos albus), oceanspray (Holodiscus discolor), Pacific ninebark (*Physocarpus capitatus*), and vine maple (*Acer circinatum*). (4,5,7,10,11)
Plant strategy type / successional stage (stress-tolerator, competitor, weedy/colonizer, seral, late successional)	Early to late-seral, since honeysuckle seems to be fond of open wooded areas or forest edges, which suggests it might be ruderal. (1,4)
PROPAGATION DETAILS	
Ecotype (this is meant primarily for experimentally derived protocols, and is a description of where the seed that was tested came from):	n/a
Propagation Goal (Options: Plants, Cuttings, Seeds, Bulbs, Somatic Embryos, and/or Other Propagules):	Plants
Propagation Method (Options: Seed or Vegetative):	Hard or softwood cuttings, fresh seeds (7,11)
Product Type (options: Container (plug), Bareroot (field grown), Plug + (container-field grown hybrids, and/or Propagules (seeds, cuttings, poles, etc.))	n/a
Stock Type:	n/a
Time to Grow (from seeding until plants	About one year.

are ready to be outplanted):	
Target Specifications (size or characteristics of target plants to be produced):	Not stated in literature.
Propagule Collection (how, when, etc):	Collect seeds in late summer to early fall. Hardwood cuttings should be taken in the fall, while softwood cuttings during the height of summer. (7)
Propagule Processing/Propagule Characteristics (including seed density (# per pound), seed longevity, etc):	Not stated, but since seeds are enclosed in a fleshy berry, once would assume that seeds loose viability as it dries. (7)
Pre-Planting Propagule Treatments (cleaning, dormancy treatments, etc):	Plant the seeds flesh and all or plant presoaked and cleaned seeds (preferably after 3 months of cold stratification) in a seedling potting mix. However, cuttings should be treated with rooting hormone. (7,11)
Growing Area Preparation / Annual Practices for Perennial Crops (growing media, type and size of containers, etc):	Hardwood cuttings can be placed in pots of sand and placed outside in a shady, humid spot to grow. However softwood cuttings should be planted in pots of 1:1 parts of vermiculite and perlite and kept in a place of high humidity with bottom heat. (2,7,11)
Establishment Phase (from seeding to germination):	Not stated in literature, but for seeds, taking 3 months of cold stratification into consideration, maybe 3-4 months.
Length of Establishment Phase:	Not stated in literature.
Active Growth Phase (from germination until plants are no longer actively growing):	Mid-spring to mid-fall
Length of Active Growth Phase:	About 8-9 months, depending on yearly weather pattern.
Hardening Phase (from end of active growth phase to end of growing	Mid-fall to early-winter

season; primarily related to the development of cold-hardiness and preparation for winter):	
Length of Hardening Phase:	Through its first winter dormancy. (7,11)
Harvesting, Storage and Shipping (of seedlings):	Not directly stated, but store seeds in a cool dry area. (11)
Length of Storage (of seedlings, between nursery and outplanting):	As seeds start to dry the rate of germination may decrease.
Guidelines for Outplanting / Performance on Typical Sites (eg, percent survival, height or diameter growth, elapsed time before flowering):	Slowly introduce them to outdoor conditions, if plants were grown in the greenhouse. Use the typical method of hardening off, also keep the season and growth cycle of the plant in mind. (7,11)
Other Comments (including collection restrictions or guidelines, if available):	Collect with minimal ecological disturbance.
INFORMATION SOURCES	
References (full citations):	1) Hitchcock, C. Leo and Cronquist, Arthur. Flora of the Pacific Northwest. 1998. University of Washington Press, Seattle and London. (2) Leigh, Michael. Grow Your Own Native Landscape. 1999. Washington State University Cooperative Extension – Thurston County, WA. (3) Native Plants Journal and Network. http://www.nativeplantsnetwork.org (4) Pojar, Jim and McKinnon, Andy, eds. Plants of the Pacific Northwest Coast: Washington, Oregon, British Columbia and Alaska. 1994. Lone Pine Press, British Columbia. (5) Royal British Columbia Museum. http://rbcm1.rcbm.gov.bc.ca/nh_papers/nativeplants/lonicili.html (6) USDA, NRCS. 2002. The PLANTS Database, Version 3.5 (http://plants.usda.gov) National Plant Database Center, Baton Rouge, LA 70874-4490 USA. (7) Young, James A. & Young, Cheryl G. Collecting, Processing and Germinating Seeds of Wildland Plants. 1999. Timber Press, Portland OR. (8) Native Plant Workbook Index Page.

	http://depts.washington.edu/propplnt/Plants/LOCI.htm (9) The Burke Museum of Natural History and Culture. 2006. http://biology.burke.washington.edu/herbarium/imagecollection.php?Genus=Lonicera&Species=ciliosa (10) Rainy Side Gardeners. 1998. http://www.rainyside.com/features/plant_gallery/nativeplants/Lonicera_ciliosa.html (11) Lady Bird Johnson Wildflower center. The University of Texas at Austin. 2007. http://www.wildflower.org/plants/result.php?id_plant=LOCI3 (12) Wikipedia. 2008. http://en.wikipedia.org/wiki/Lonicera_ciliosa
Other Sources Consulted (but that contained no pertinent information) (full citations):	(13) Floridata. 1996. http://www.floridata.com/ (14) Daves Garden. 2000. http://davesgarden.com/guides/pf/go/51681/
Protocol Author (First and last name):	Terence Huang
Date Protocol Created or Updated (MM/DD/YY):	5/19/08

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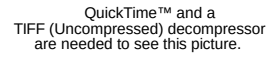
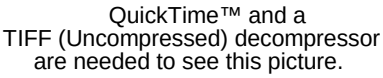
http://www.nativeplantnetwork.org/network/SampleBlankForm.asp

Species

Orange honeysuckle, *Lonicera ciliosa* (Pursh) Poir. Ex DC.



Perennial vine, prostrate or twining climber to 6 m long, leaves opposite, oval, 4-10 cm long, deciduous, dull green above glabrous white below with ciliated margins. Flowers orange-yellow to orange-red 2.5-4 cm long born on verticals pollinated by hummingbirds. Fruit orange-red translucent, several-seeded berries 1 cm wide. (1,4,5)



Range

Wide-spread western North American native found from sea level to mid- elevations. (1,4,6)

Climate, elevation

Pacific maritime climate from sea level to 1000 m (sometimes up to 3500 m) as well as shadier, cooler locations of the western interior. (1,4,6)

Local occurrence

Common throughout Puget Sound in open forests, forest clearings, forest edges, thickets, and hillsides. (4)

Habitat preferences

Partial to full shade in well-drained soils especially in forest edge ecotones. (1,4)

Plant strategy type/successional stage

Not specifically noted in literature however given orange honeysuckle's preference for forest edges it may be an early to mid seral species that tolerates the particular disturbances of the forest edge and therefore could be considered a ruderal.

Associated species

Widely associated with both broadleaf deciduous and coniferous forests throughout its range. Commonly found locally beneath big-leaf maple (*Acer macrophyllum*), Douglas-fir (*Pseudotsuga menziesii*), western red cedar (*Thuja plicata*), and western hemlock (*Tsuga heterophylla*). Often found associated with edge associated shrubs such as snowberry (*Symphoricarpos albus*), oceanspray (*Holodiscus discolor*), Pacific ninebark (*Physocarpus capitatus*) and vine maple (*Acer circinatum*). (personal observation)

May be collected as:

Seed – ripens August-September, macerate with water to float off pulp or sow whole fruit for same season seeding. (2,3,7)

Cuttings – Vigorous softwood, hardwood cuttings or naturally layered sections of prostrate stems. (2,3,7)

Salvage – salvaged mature plants may be slow to recover. (2,3,7)

Collection restrictions or guidelines

Typical conservative collection methods for genetic integrity and minimal ecosystem impact apply.

Seed germination

Seed maybe slow to germinate without a three month cold stratification. (2,3,7)

Seed life

Not noted in literature.

Recommended seed storage conditions

Not noted in literature but typical low temp, low humidity conditions may apply.

Propagation recommendations

Hardwood cuttings can be treated with root hormone and stuck in pots of sand outside. A closely related species of similar growth habit also found in the same locations and conditions, hairy honeysuckle, *Lonicera hispidula*, is rooted in flats in typical 1:1 vermiculite:perlite media and regularly misted in a greenhouse. Softwood cuttings should be placed in typical vermiculite:perlite rooting media and kept humid conditions with bottom heat. Rooted cuttings are ready for installation after the first year. (2,3,7)

No specific mention of seed propagation methods are made for *L. ciliosa* beyond sowing whole fruits outdoors in the fall and that greenhouse propagated seeds require a three month cold stratification. *L. hispidula* seeds are soaked for 24 hours in fresh water and then cold stratified in peat: perlite for three months. Germinated seedlings are then sown in flats with a standard seedling media and potted up after emergence into standard potting media. (2,3,7)

Salvaged individuals have been noted to be slow to recover. Survival and recovery speed may be increased by nurturing in greenhouse conditions before outplanting the next season. (2,3,7)

Soil or medium requirements

None specifically noted other than that mentioned above.

Installation form

Whole fruit can be directly sown into the field. Greenhouse raised germinants and rooted cuttings are ready for outplanting after one year. Salvaged plants may be installed but may not successfully recover. (2,3,7)

Recommended planting density

Not noted in literature. Orange honeysuckle is a twining, rambling vine that can cover a considerable area therefore wide spacings of 2 m or more might be appropriate.

Care requirements after installed

Not noted in literature. Orange honeysuckle is not tolerant of saturated conditions but

under dry conditions after installation may need occasional watering.

Normal rate of growth or spread; lifespan

Not specifically noted in literature. Orange honeysuckle seems to be a moderately fast grower with a moderate lifespan of unspecified length

Sources cited

(1) Hitchcock, C. Leo and Cronquist, Arthur. Flora of the Pacific Northwest. 1998. University of Washington Press, Seattle and London.

(2) Leigh, Michael. Grow Your Own Native Landscape. 1999. Washington State University Cooperative Extension – Thurston County, WA.

(3) Native Plants Journal and Network. http://www.nativeplantsnetwork.org

(4) Pojar, Jim and McKinnon, Andy, eds. Plants of the Pacific Northwest Coast: Washington, Oregon, British Columbia and Alaska. 1994. Lone Pine Press, British Columbia.

(5) Royal British Columbia Museum. http://rbcm1.rcbm.gov.bc.ca/nh_papers/nativeplants/lonicili.html

(6) USDA, NRCS. 2002. The PLANTS Database, Version 3.5 (http://plants.usda.gov) National Plant Database Center, Baton Rouge, LA 70874-4490 USA.

(7) Young, James A. & Young, Cheryl G. Collecting, Processing and Germinating Seeds of Wildland Plants. 1999. Timber Press, Portland OR.

Data compiled by

Rodney Pond 05.07.03