On-Site Plant Propagation

Techniques and Best-Suited Species

Forest Steward Training
May 1, 2010
Divisions

• Taking one plant and dividing it into two or more plants

• Two types
  • Herbaceous
    • Perennials
    • Ferns
  • Woody
    • Suckering shrubs
Herbaceous Divisions

• How?
  • Dig up the entire plant including as much of the root ball as possible
  • Split the plant in 2 (or more) equal parts using a spade or shovel
  • Make sure growing points of shoots and roots are included
  • Plant the new plants back out into the landscape

• Best Time?
  • When the plant is dormant
    • Usually fall through winter
Herbaceous Divisions

- Best Candidates
  - Lady Fern (*Athyrium felix-femina*)
  - Deer Fern (*Blechnum spicant*)
  - Sedges (*Carex spp.*)
  - Pacific Bleeding Heart (*Dicentra formosa*)
  - Rushes (*Juncus spp.*)
  - Sword Fern (*Polystichum munitum*)
  - Bulrushes (*Scirpus spp.*)
Herbaceous Divisions
Woody Divisions

- **How?**
  - By removing the rooted sucker from its parent
  - Make sure the parent plant is well established
  - Use a spade or shovel to make a clean cut
  - Dig up the new plant with little disturbance to the parent plant
  - Replant the division out in the landscape

- **Best Time?**
  - When the plant is dormant
    - Usually fall through winter
Woody Divisions

- Best Candidates
  - Dewberry (*Rubus ursinus*)
  - Hardhack (*Spiraea* spp.)
  - Hazelnut (*Corylus cornuta*)
  - Mock orange (*Philadelphus lewisii*)
  - Roses (*Rosa* spp.)
  - Salmonberry (*Rubus spectabilis*)
  - Snowberry (*Symphoricarpos albus*)
  - Thimbleberry (*Rubus parviflorus*)
Woody Divisions
“Live” Stakes

- Use straight, strong stems with healthy buds
- No “soft” growth

How?
- With clean hand pruners, cut long branches
  - 1.5 feet long, no more than 2” diameter
- Make an angled cut at the bottom to help drive stake into the ground
  - You can tell top from bottom looking at the direction the buds are pointing in
- Make a flat or slightly angled cut at the top
- Use a mallet to drive stakes into the ground
  - Leave two nodes above soil level
- Plant randomly; not in rows

Best Time?
- Right after leaves drop or just before buds break
- The ground must be wet
“Live” Stakes

- Best Candidates
  - Black Twinberry (*Lonicera involucrata*)
  - Elderberries (*Sambucus* spp.)
  - Pacific Ninebark (*Physocarpus capitatus*)
  - Red-osier Dogwood (*Cornus sericea*)
  - Salmonberry (*Rubus spectabilis*)
  - Willows (*Salix* spp.)
“Live” Stakes
Layering

- Producing a new plant by taking a branch still attached to the parent plant, burying it in the ground, and having it root.

- Technique
  - Gently bend a long branch towards the ground
  - Form a “U” shape, causing the middle to crack, but still be attached
  - Stake at this point into the ground and bury the “U” with several inches of soil
    - A ground staple can also help to anchor the branch in place
  - A new plant should be ready in 6 months to a year for transplanting
  - Once the plant is ready, use the method for woody divisions to sever the new plant from its parent

- Timing
  - Early spring is best
Layering

• Best Candidates
  • Black twinberry (*Lonicera involucrata*)
  • Elderberries (*Sambucus* spp.)
  • Indian plum (*Oemleria cerasiformis*)
  • Orange honeysuckle (*Lonicera ciliosa*)
  • Red-osier dogwood (*Cornus sericea*)
  • Willow (*Salix* spp.)
  • Most deciduous and evergreen shrubs
Layering
Difficult Species: Salal

- **Gaultheria shallon**
  - Good layering candidate, but does not transplant well
  - Easily propagated by seed in the greenhouse—no treatment necessary
  - Would need to be in a spot without a lot of disturbance if broadcasting seed on-site
Difficult Species: Oregon Grape

- **Mahonia** spp.
  - Does not transplant well
    - Long roots does not lend itself for this
  - Have had success with collecting seedlings apx 1-2” tall for growing on in the greenhouse
Difficult Species: Madrone

- *Arbutus menziesii*
  - Another easy candidate for seed germination
  - Volunteer seedlings often found in the field—tempting to try and transplant
  - Low survival rate
Questions?

Contact Information
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Resources:
Grow Your Own Native Landscape.
WSU Thurston County

http://www.sf.adfg.state.ak.us/SARR/restoration/techniques/livestake.cfm (Live Staking)