

Garden Shrubs Measured by Line Transect

Measure the shrub layer in a garden and see how it changes over time as your garden matures. Percent cover is an efficient means of understanding the relative abundance and contribution to the ecosystem made by different plants. Percent cover is a measure of influence. Since plants may be persisting, or dropping out, or coming in to the system, you have to monitor over time.

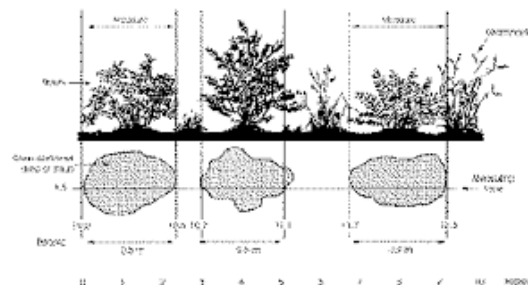
Materials

1. 50-m tape
2. Meter stick
3. maps of site

Procedure- sampling percent cover using line intercept

This method removes a fair amount of the guessing involved in giving each species an abundance code, but is a bit more time-consuming. If you're sampling woody species that are not too tall and have fairly distinct canopy profiles (e.g., rhododendron, sage brush, scotch broom), the best way to get an accurate and repeatable estimate of cover is to run a series of transect lines (meter tapes) through the vegetation (e.g., 25-50 m lines). This is called the line intercept method.

1. Lines should run as close to the ground as possible and should be straight and tight.
2. Along each line, for each species, record the "start" and "end" points where a species' canopy intercepts the line (over or under the tape) (see figure below).
3. If species 1 occupies 3.95 m and 1.31 m along a 10-m transect, then it's percent cover would be: $[(3.95 + 1.31)/10] \times 100\% = 52.6\%$. This number represents the percent of the total ground covered by this plant species. You can calculate percent cover for each species using this method, and then compare each species' percent cover between the two different stand conditions. Use the data sheet below.
4. With this method, you'll want to run a number of lines because you won't cover much area with one line. The nice thing about this method is that identifying start and end points is fairly objective.



Shrub names	Transect start	end	Total plant length	Length transect	Total transect length X 100%
Acer circinatum (Vine Maple)					
Corylus cornuta (Hazelnut)					
Cornus nutalli (dogwood)					
Cornus sericea (redosier dogwood)					
Gaultheria shallon (Salal)					
Holodiscus discolor (Ocean spray)					
Ilex aquifolia (Holly)					
Mahonia nervosa (Oregon grape)					
Oemleria cerasiformis (Indian plum)					
Philadelphus lewisii (Mock orange)					
Prunus laurocerasus (English Laurel)					
Ribes sanguineum (Redflowering currant)					
Ornamental Rhododendron					
Rosa gymnocarpa (Rose)					
Rubus parviflorus (Thimbleberry)					
Rubus spectabilis (Salmonberry)					
Sambucus racemosa (Elderberry)					
Symphoricarpos albus (Snowberry)					
Vaccinium parviflorum (Huckleberry)					