

Line Point Intercept Measurements

Materials:

Metric measuring tape the length of the transect or slightly longer
Steel candy cane shaped pins for anchoring tape
Long pin flag
Clip board and LPI data sheet

Method:

Set up 35m transect line between the designated start and end of the transect using candy cane pins. Pin the "0" end of the transect at the start point and walk with the tape reel out to the desired end point distance. Transect line should be as straight and as low to the ground as possible, by threading the tape at the base of trees and shrubs. When setting up the tape, always walk on the down slope side of the transect and avoid disturbing the soil underneath the transect. When you have reached the desired transect distance, pull tape taut and pin tape reel to the ground.

Taking Measurements:

1. For all LPI measurements, begin at the "0" end of the line and working on the downslope edge of the tape, move the dowel along the edge of the tape. Always stay on the same side of the line.
2. Look directly down on the tape and use a long pin flag to project a line vertically to the ground.
3. Start at **0.5m** and take measurements every **half meter** for the duration of the line (70 points total).
4. Drop the pin flag to the ground from a standard height using the following rules:
 - a. Pin should be dropped from the ground at a standard height each time.
 - b. Pin should be dropped vertically along the line.
 - c. Do not guide the pin to the ground.
5. Record canopy and surface soil hits following the rules below:
 - a. The top canopy is reserved for non-direct hits on shrubs and trees (i.e. you are under a shrub or in between the branches of a shrub or tree, but you could project a line up and hit a branch of the plant). Record plant code.
 - b. If the plant is dead, denote this by circling the code.
 - c. If no trees or shrubs are intercepted in the "top canopy," leave this column blank.
 - d. Record all additional canopies intercepted with pen, denoting whether or not the canopy is live or dead.
 - e. Record each species only once, even if it is intercepted more than once.
 - f. See the specific codes and definitions below.
 - g. Plants may only be recorded in the "soil surface" column, if the plant base is intercepted with the pin.

LPI Data Management:

1. Enter data into the appropriate LPI data template. Template information should be filled out to reflect the conditions and timing of the data taken. File should be saved as LPI_yyyy.mm.dd_Site (ex. LPI_2009.07.21_SM).

LPI definitions:

- Litter- Detached dead stems and leaves that are part of a layer in contact with the ground.
- Wood- Detached woody litter that is greater than 5mm and in contact with soil.
- Embedded Litter- Typically a large mass of litter still attached to the ground, as in a dead plant base or that would leave a impression in the soil if removed.

LPI Codes:

R = Rock

B = Bedrock

EL = Embedded litter

D = Duff

M = Moss

LCY = Light Crust

DCY = Dark Crust

LC = Lichen

S = Soil

W = Wood

L = Litter

Lag = Lagomorphs Scat

Ung = Ungulate Scat

If you cannot identify the genus, then use the following codes:

AF# = Annual Forb

AG# = Annual Graminoid

PF# = Perennial Forb

PG# = Perennial Graminoid

SH# = Shrub

TR# = Tree