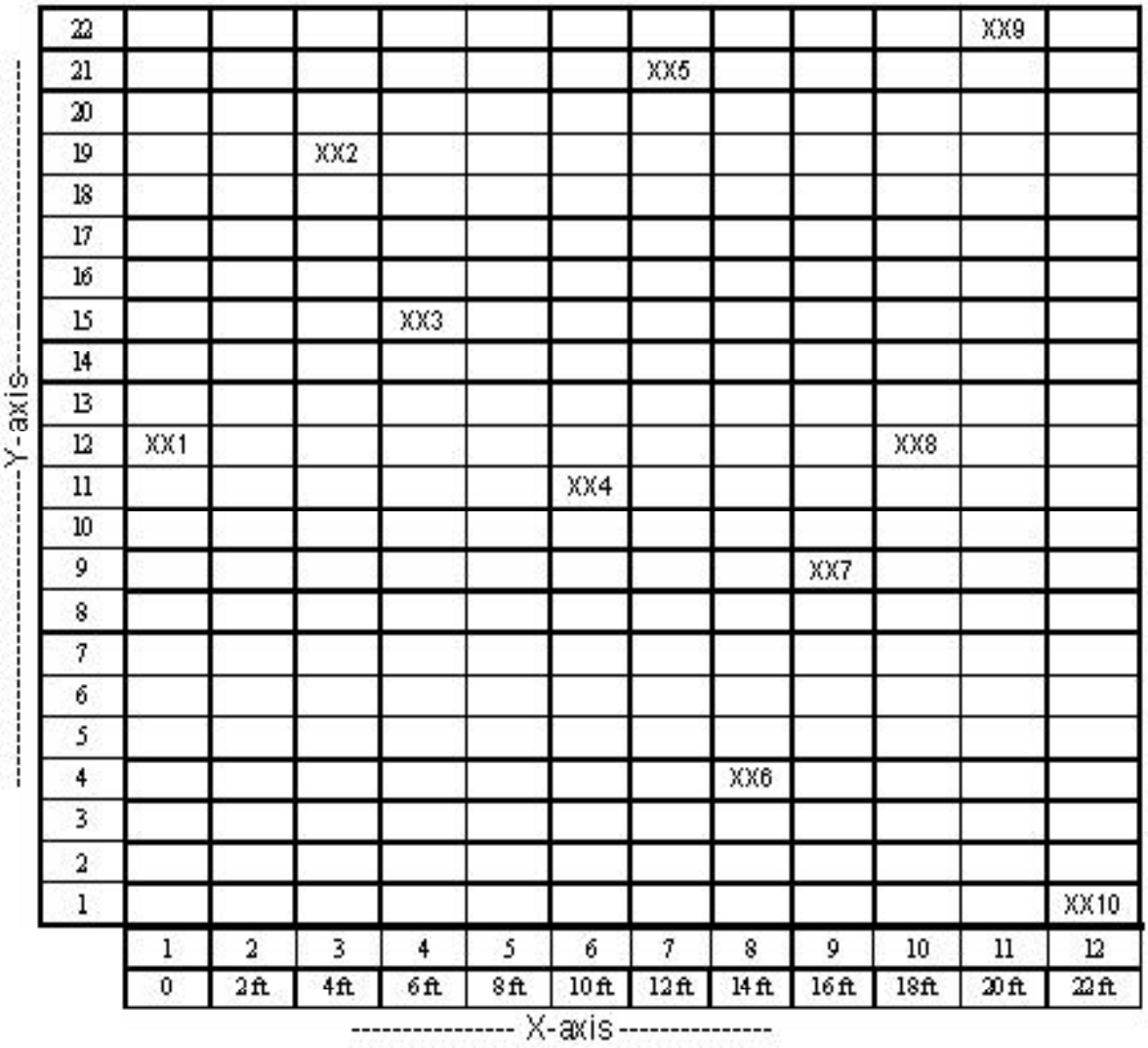
Appendix G: Macroplot Design for Measuring Density

Designed for a 1 x 2 ft. quadrat in a 22 x 22 ft. macroplot

The X-axis is in 2 ft. increments; the Y-axis is in 1 ft. increments.



Each square (cell) is a quadrat measuring 2 ft x 1 ft.

Vertical and horizontal numbers are the coordinates of the Y and X axes respectively

xx = randomly selected quadrat to be sampled

Examples: XX1 = coordinate (1,12); XX2 = coordinate (3,19); XX3 = coordinate (4,15);
XX4 = coordinate (6,11); XX5 = coordinate (7,21); XX6 = coordinate (8,4);
XX7 = coordinate (9,9); XX8 = coordinate (10,12); XX9 = coordinate (11,22);
XX10 = coordinate (12,1)

Macroplot Instructions

Size: The sides of the macroplot need to be multiples of the sides of the quadrat. For example, a macroplot of 25 ft by 50 ft could be designed for a 1 x 2 ft quadrat.
A total of 500 (1X2 ft) non-overlapping quadrats could be placed within the macroplot.

Quadrats: Quadrats are small, measured areas that are used to sample vegetation. Rather than measure all of the vegetation is a large plot area (e.g., 0.5 acre plot), a smaller plot (e.g., 10 X 20 inch rectangle) is used. Placement of the quadrat can be completely random (e.g., close your eyes and throw it), can be placed along a measured transect (straight line), or can be precisely located within the macroplot by a set of randomly selected XYcoordinates. The random coordinates are generated from a random numbers table.

- Design the macroplot.
- Determine the quadrat shape and size.
- Randomly select the coordinates.
- Mark the selected quadrat on a macroplot layout to help locating the quadrats in the field.
- If a pair of coordinates repeats, drop the second set of coordinates, and select another set.
- Outline the macroplot at the field site. Place the Y-axis measuring tape perpendicular to the slope and upslope from the 0,0-ft mark. This is the Y-axis. Carefully mark the beginning and ending of the Y-axis. Place a second measuring tape along the slope perpendicular to the Y-axis. This is the X-axis. Where the two lines meet is the origin with a coordinate of 0,0. Other coordinates are measured from this point. The two numbers of a coordinate refer to X position then the Y position. For example, a coordinate of (15,8) means 15 feet across the X-axis and 8 feet up the Y-axis.
- Position the quadrat so that the long side is parallel to the X-axis, and placed adjacent and above the tape (upslope side of the tape) with the lower-left hand corner corresponding to the set of coordinates.
- Sample from 20 to 30 quadrats.

Sample Coordinate: