PLOT OBSERVATION

OBJECTIVE:

In this lab you will be introduced to different methods of plot sampling. You will also study and compare different habitats within Rowan University.

INTRODUCTION:

The plot sampling method is one of the basic and commonly used procedure for sampling many types of organisms. Typically a **plot** is a rectangle or square, although other shapes can be used. In plot sampling, one takes a given area of manageable size, and will identify, count and perhaps measure all individuals within it. This is an assessment of all plants and animals in a given **community**.

When identifying the species within a plot, be sure to minimize bias. Bias in plot sampling occurs when plants or animals are not included in the survey because the observer felt that they were not ideal representations of the area. Plot sampling is often duplicated or replicated many times in order to obtain an adequate representation of the community.

PART ONE
PLOT SAMPLING

In this exorcise you will be working in table teams. Your instructor will suggest good places around campus for your group's plot observation.

1) Before you leave for the field, obtain a rope and stake set, a collection bag, paper and pencil to record your observations.

2) Once you determine where your plot will be mark the location on the campus map provided.

3) Using the stakes and ropes stake out your 7m X 14m plot.

4) With graph paper make a scale map of your plot. Identify all components of your plot on the map.

5) Classify the plants in the area according to type: lichen, fungus, moss, fern, tree seedlings, grass, shrubs and larger trees. Use the Plot Observation Table at the end of his lab to record your findings.

6) Identify the trees and approximate height. Obtain leaves of unknown trees as field guides will be provided back in the laboratory for you to use.

7) Construct a key or table to accompany the map of your plot.

Where was your plot located?_____

_____

PART TWO
TRANSECT SAMPLING

In this portion of the lab you will be using the transect sampling method. In some types of land forms, the use of plots may be impractical and very time consuming. The use of transects are often used in ecological succession of communities at transition zones (lakes to banks for instance)

1) Before you leave for the field, obtain a rope and stake set, a collection bag, paper and pencil to record your observations.

2) Mark out a transect connecting two randomly selected points on campus. Place one stake in the ground and place another stake 100m away.

3) Once have identified where your transect will be mark the location on the campus map provided at the end of this lab.

4) Divide the transect into four contiguous segments of 25m long.

5) Classify and count all trees and bushes, (per specie) found in each continuous segment transect. Begin counting at one end of the line and record the data for each 25m interval. Count only those plants that are within 1cm of the line. Include any aerial foliage which may overlie the transect. Use the Transect Observation Table at the end of his lab to record your findings.

6) Construct a table and scale map including trees and bushes, and the abundance per specie.

Where was your transect located?_____

_____

Laboratory Questions

Student_____ **Section**_____

Date_____

1) What were the main features or specimens of your plot?

2) What were the main features or specimens of your transect?

3) How did the plot method differ from the transect method?

4) Describe a situation where you might use a plot sampling method.

5) Describe a situation where you might use a transect sampling method.

Plot Observation Table

specimens	number observed

Transect Observation Table

specimens	number observed