

# **Ecological Survey Of Succession**

## **Aims:**

1. To record changes in species composition from a grassland to a woodland.
2. To record changes in height of the ground at metre intervals.

## **Variables:**

Dependent Variable – The number of different plant species, I will measure this by placing a 0.5 x 0.5m quadrat on the ground.

Independent Variable – Holy Cross field to Duxbury woods.

Fixed – Quadrat area

Distance between quadrats

## **Prediction:**

I predict that in the field there will be less variation and more dominant species due to interference by man. In the wood there will be more variation and less dominant species, therefore, the rate of succession in the wood will be more obvious than on the field because of less human interference.

## **Apparatus:**

- 0.5 x 0.5m quadrat frame
- 2 canes
- 1m rule
- Spirit level
- Tape measure
- Light string
- Toilet roll tubes
- Identification keys

## **Method:**

I will find a area of the field which leads into the wood then I will place my tape measure from the field into the wood, then at every 1m interval for 20m I will drop the quadrat frame by the tape measure. In each quadrat, I will identify the species of plant in it with an identification key, then estimate the percentage of which it covers and record it. After I have successfully done this, I will stand in the quadrat frame, look up through the toilet roll tube, and calculate the percentage of canopy cover by how much of my view is obscured by the canopy. On completion of this, I will measure the height lost or gained. To do this, one cane will be placed in the ground at 0m by the tape measure and the other cane in the ground at 1m by the tape measure, once I have done this I will tie the string on each cane to make a horizontal line, which will be around 0.5m above the ground. Then to check the line is horizontal I will use my spirit level. To measure the height I will record the height of the string on each cane. If the height of the ground increases from the first cane at 0m to the second cane at 1m I will record it as positive, if it decreases I will record it as negative.

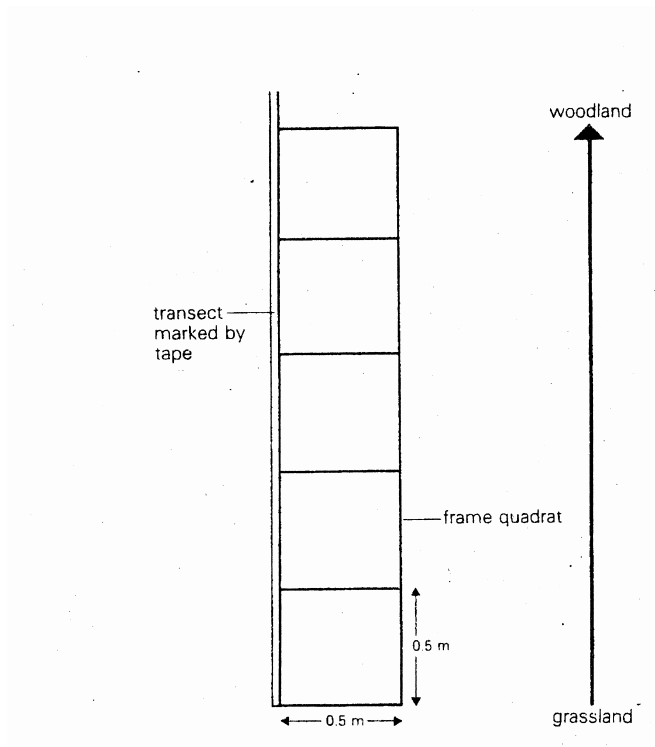


Diagram showing the placing of quadrats.

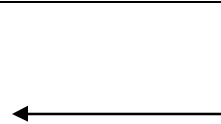
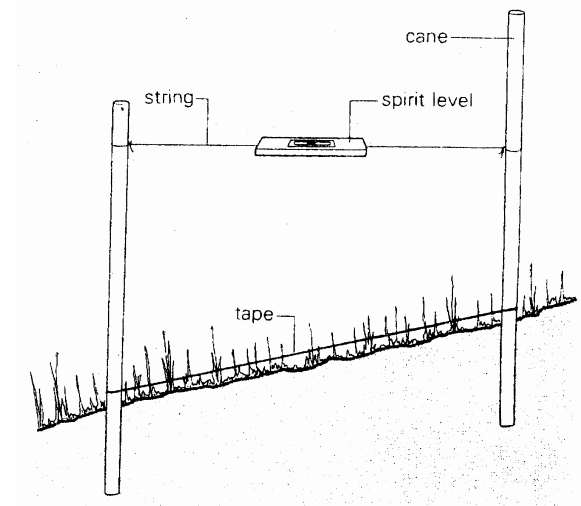


Diagram showing the setup for a profile transect.



**Safety:**

The safety procedures for this survey are as follows:

1. To stay on footpaths at all times
2. To wear suitable footwear