

The following methods for measuring abundance might be used in studies that measure data (individuals) such as different species of vegetation or sediment of different geological types.

1. Density (the number of individuals in an area)

A quadrat is placed on the ground (or a set area size is measured out) and the number of individuals found within in are counted and recorded.

2. Frequency (the chance of finding a particular individual type in an area)

a) Place a quadrat on the ground multiple times and count the number of times the individual appears in any quadrat:

$$\text{percentage frequency} = \frac{\text{number of quadrats in which the individual was observed}}{\text{total number of quadrats placed}} \times 100$$

b) Place a closed quadrat (one with an internal grid) in an area and count the number of squares in which the individual appears:

$$\text{percentage frequency} = \frac{\text{number of squares in which the individual was observed}}{\text{total number of squares in the quadrat}} \times 100$$

3. Patch cover (how much of an area is taken up by a type of individuals in clusters)

Place a closed quadrat in an area and count the number of squares in which the individual appears where the squares are touching. Repeat over a number of quadrats to get an average cluster size estimate.

