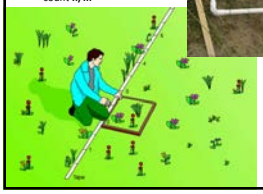
Ecological Sampling

Surveying population size, density, and distribution

Quadrat

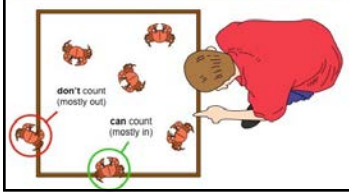
- Use quardrat appropriate for size and abundance of organisms of interest
- Most common: **1m x 1m** ("meter quadrat")
- ∴ count **n/m²**



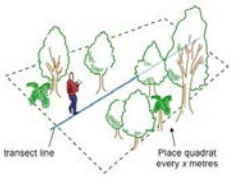
Quadrat

- Place at regular (systematic) or random intervals

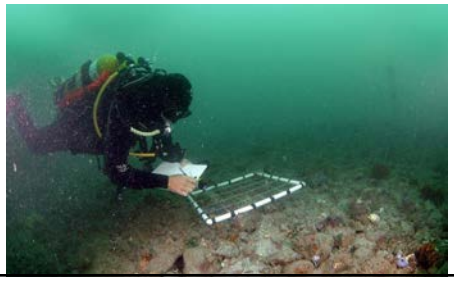
Quadrat Counting Method



Line Transects



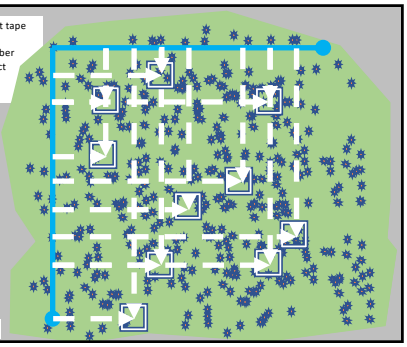
Quadrat



1. Lay down transect tape or line
2. Use random number generator to select coordinate of quadrat sample

x	y
7	5
2	2
4	8
2	4
9	7
5	6
8	2
8	8
3	10
4	1

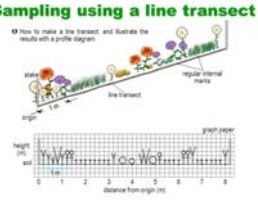
https://www.random.org



Transect

- Transect tape

Sampling using a line transect

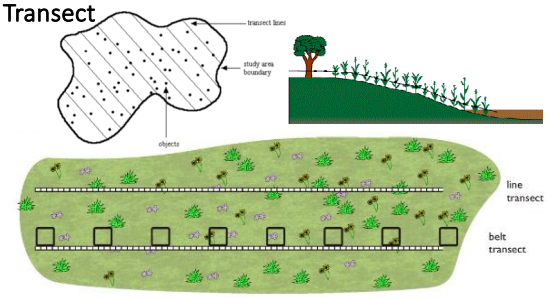


Transect

- Transect tape

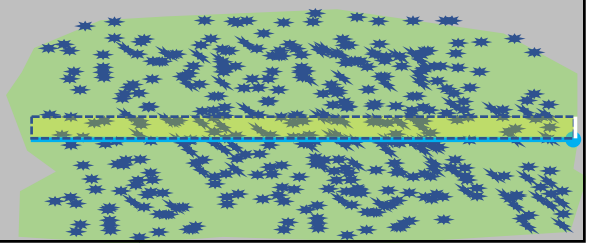
Transect

Parallel transect lines at different distance from stream, shore road, etc.



Band Transect

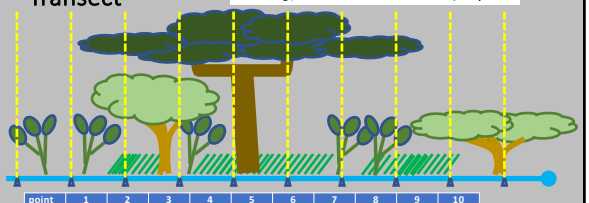
1. Lay down transect tape or line
2. Count objects/organisms within set distance form transect
   - E.g., **50-m transect x 2-m band = n/100 m²**



Band Transect

Point-intercept Transect

1. Lay down transect tape or line
2. At set intervals along transect, note all objects/organisms in vertical space in contact with that point.
   - E.g., **50-m transect x 0.5-m interval = n/100 points**



point	1	2	3	4	5	6	7	8	9	10
grass			x		x	x		x	x	
forb	x						x	x		
shrub			x	x					x	x
tree			x	x	x	x	x	x		

Point-intercept Quadrat

1. Lay down gridded quadrat
2. Record object/organism contacted at cross-points