Module 18: Abundance and distribution

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Start with this:



A crude example of this might be:

- individual-you
- population-HPA
- students community-HPA
- ecosystem-education
- biosphere-the world

or:

- some rabbit individual
- some of the rabbit's friends,
- a population of rabbits
- rabbits and the things they eat and eat them-community
- ecosystem-the plants that support both ends of this process
- biosphere-the planet

We covered ecosystem energy and matter a few weeks ago, this chapter is about population ecology.

Population dynamics

Notation: Population size is represented as N (note not "n"): population size within a defined area at a specific time (brings in migration).So, we could say the student population of HPA would be all students **here** this year, **2022-2023**
Check out the diagrams on population distribution: random, uniform and clumped. Important vis a vis biodiversityStructures: age and gender (sex)



- **Density dependent factor:** e.g. food or reproductive rate in rats (more rats, lower "fecundity" or birthrate)
- Something that influences reproduction or survival...
- **Density independent factors:** storms, disasters, fires (note density independent: one bambi or 100 bambi all perish in the same fire)
- **Limiting resource:** usually food, but could include space, nutrients, etc.
- **Carrying capacity:** K (note not "k"): how many individuals an environment can support

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