

how one body copes with its habitat, and how a whole population does the same math differently



Ecological Hierarchy

- ecology: interactions among organisms, and between organisms and their abiotic environment
- term first used by Reiter, given substance by E. Haeckel (1865)
- four sequential levels of increasing complexity: organism, population, community, biome
- a population: organisms of the same kind sharing a geographical area
- several populations interacting in one area form a community
- a biome: a large regional unit set by climate, with its own major vegetation and fauna
- six major terrestrial biomes exist worldwide, sorted by mean temperature and rainfall
- desert, grassland, tropical forest, temperate forest, coniferous forest, arctic/alpine tundra

Ecological hierarchy



four levels the chapter sorts an ecosystem into

Habitat vs Niche *

Habitat

- the physical place a species lives, defined by sunlight, rainfall, temperature, soil and other abiotic factors
- not species-specific, supports numerous species at once, contains many niches

Niche

- the functional role an organism plays: what it eats, how it interacts
- how it fulfils its needs (J. Grinnell, 1917)
- species-specific, supports a single species at a time
- colloquially: habitat is a postal address, niche is a profession

no two species can share the same niche; three kinds are recognised: spatial (physical space), trophic (feeding level), and multidimensional/hypervolume (all factors combined)

