

Ecology Review part 2

1. What is the niche concept and how is it useful in the study of competition?
2. What did Connell's study, in which he removed each of 2 competing species of barnacles, demonstrate? Remember that he got different results for the two species.
3. Be able to interpret Connell's results in terms of the fundamental and the realized niche of each species.
4. What is species diversity and how does it differ from species number
4. What is a food web and what does it tell you about the relationships among species in a community?
5. How do competition and predation influence species diversity in a community?
6. What did Paine's work involving the removal of a predatory starfish from an intertidal community illustrate? Would you expect the same result if you removed any predator from any community - why or why not?
- What are succession and the intermediate disturbance hypothesis, and how are they related?
- What processes cause species composition to change through time during succession
8. How is an ecosystem different from a community and what are the 2 major processes of interest in the study of ecosystems?
9. Be able to describe and explain how energy enters and flows through a community. Know the ultimate source of that energy.
10. How is each of the trophic levels in a food chain defined and what is the role of each in ecosystem processes?
11. What processes determine how much energy enters and flows through a community.
- What is ecological efficiency and what determines how efficient a species is?
12. Be able to explain what factors do and do not limit the net primary productivity of terrestrial and aquatic ecosystems and the evidence that supports this conclusion.
14. What determines the biome that is characteristic of a particular location on Earth?
15. What determines the major zones of climate on Earth?
16. Be able to explain the relationships between air temperature, air density, and the ability of air to hold moisture.
17. Be able to explain exceptions to latitudinal determination of climate.
19. Recognize the major features of the major terrestrial biomes and the climate associated with each.
20. What are the three levels of biodiversity and how is each relevant to Human welfare and economics?
21. What is the evidence that there is a human-caused biodiversity crisis?
22. What are the three main causes of extinctions due to Humans?

Definitions:

fundamental niche
realized niche
community
species diversity
ecological efficiency

decomposer (detritivore)
gross primary productivity
net primary productivity
succession
omnivore

biogeochemical cycles
ecosystem
seasonality
Keystone species
Production

producer
climate
refuge
disturbance
biomass