TEXT READINGS

pp. 123-139

VOCABULARY

symbiosis  parasitism  commensalisms  mutualism  microparasite  macroparasite  biotroph  necrotroph  horizontal transmission  vertical transmission  direct transmission  indirect transmission  vector cellular response  humoral response  immunity  preening localized cell death  obligate host switch  primary host  secondary host social parasite  brood parasitism  coevolution  obligate facultative  opportunistic  diffuse  zooxanthellae pollination  frugivore  fleshy fruit  ruminant cellulase  mimic  host  symbiont parasitoid

STUDY QUESTIONS

1. Contrast the three types of symbiotic relationships that can exist between different species. In your presentation, be sure you define the host and the symbiont. Provide some examples to illustrate your presentation.

2. Contrast microparasites with macroparasites. Give several examples of each.

3. Discuss the various modes of transmission of parasites from host to host.

4. Describe the various ways in which a host may respond to parasitism.

5. Provide several descriptive examples of the complex life cycles of parasites involving multiple hosts. How might such complex life cycles have arisen evolutionarily?

6. Describe social parasitism in the cuckoo. How does mimicry play into this brood parasitism?

7. Contrast symbiotic mutualisms with nonsymbiotic mutualisms. Provide several examples.

8. Contrast obligate relationships with facultative ones. Provide several examples.

9. Discuss the nature of the mutualistic relationship between corals and their endosymbiotic zooxanthellae. Be sure to address the benefits that both partners receive as a result of engaging in this relationship.

10. Diagram and describe nutrient recycling between corals and their endosymbiotic zooxanthellae.
11. Discuss the nature of the mutualistic relationship involved in forming a lichen. Be sure to address the benefits that both partners receive as a result of engaging in this relationship.

12. Discuss the nature of the mutualistic relationship between acasia trees and ants. Be sure to address the benefits that both partners receive as a result of engaging in this relationship.

13. Discuss the various ways in which plants engage in mutualistic relationships with animals that enhance the reproductive capabilities of the plants. What role has coevolution played in these mutualisms?

14. Animals do not produce the enzyme cellulase which is necessary in order to digest the cellulose of plants. How do herbivorous animals overcome this problem. Provide at least two examples.

15. Describe the endosymbiotic theory for the origin of the mitochondrion and the chloroplast in the eukaryotic cell. What evidence is available to support this theory?