4.2 Niches and Community Interactions

The Niche
1. What is a niche?

2. Give an example of resources a squirrel might need.

3. Three different warbler species live in the same tree. One species feeds at the top of the tree, the second species feeds in the middle part of the tree, and the third species feeds at the bottom of the tree. Do all three species occupy the same niche? Explain.

Competition
For Questions 4–8, write True if the statement is true. If the statement is false, change the underlined word or words to make the statement true.

4. Competition occurs when organisms attempt to use the same resources.

5. Competition between members of the same species is known as interspecific competition.

6. The competitive exclusion principle states that no two organisms can occupy exactly the same niche in exactly the same habitat at exactly the same time.

7. Members of the same species tend to divide resources instead of competing over them.

Predation, Herbivory, and Keystone Species
Write the letter of the correct answer on the line at the left.

8. A lion eating a zebra is an example of
   A. herbivory. C. predation.
   B. habitat destruction. D. a keystone species.

9. A cow eating grass is an example of
   A. herbivory. C. habitat destruction.
   B. predation. D. a keystone species.

10. A keystone species is one that
    A. eats a mixture of plants and animals.
    B. is introduced into a community after a major disturbance.
    C. causes the amount of diversity in a community to decrease.
    D. helps to stabilize the populations of other species in the community.
Symbiosis

11. Complete the table about main classes of symbiotic relationships.

<table>
<thead>
<tr>
<th>Class</th>
<th>Description of Relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mutualism</td>
<td></td>
</tr>
<tr>
<td>Commensalism</td>
<td></td>
</tr>
<tr>
<td>Parasitism</td>
<td></td>
</tr>
</tbody>
</table>

Match the example with the type of relationship. A relationship type may be used more than once.

Example

<table>
<thead>
<tr>
<th>Type of Relationship</th>
<th>A. mutualism</th>
<th>B. commensalism</th>
<th>C. parasitism</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. a tick living on the body of a deer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. a bee eating a flower’s nectar and picking up the flower’s pollen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. a barnacle living on a whale’s skin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. a tapeworm living in a person’s intestines</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. an aphid providing food to an ant in exchange for protection</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.3 Succession

Primary and Secondary Succession

17. What is ecological succession?

________________________________________________________________________

18. What is primary succession?

________________________________________________________________________

19. When a disturbance changes a community without removing the soil, what type of succession follows?

________________________________________________________________________

20. Why does secondary succession typically proceed faster than primary succession?

________________________________________________________________________

21. Use the Venn diagram to compare the two types of ecological succession.

[Diagram of Venn diagram showing Primary succession, Both, and Secondary succession]