ADVANCED BIOLOGY: THE ORIGIN OF SPECIES

(USE CHAPER 24 AS A RESOURCE)

THE BIOLOGICAL SPECIES CONCEPT EMPHASIZES REPRODUCTIVE ISOLATION

1. The Biological Species Concept
2. Reproductive Isolation
3. Hybrids
4. Prezygotic barriers
5. Habitat isolation
6. Temporal isolation
7. Behavioral isolation
8. Mechanical isolation
9. Gametic isolation
10. Postzygotic barriers
11. Reduced Hybrid Viability
12. Reduced Hybrid Viability
13. Hybrid Breakdown
14. Limitations of the Biological Species Concept
15. Other Definitions of Species
16. Morphological Species Concept
17. Ecological Species Concept
18. Phylogenetic Species Concept

SPECIATION CAN TAKE PLACE WITH OR WITHOUT GEOGRAPHIC SEPARATION



1. Allopatric (“Other Country”) Speciation
2. The Process of Allopatric Speciation
3. Evidence of Allopatric Speciation
4. Sympatric (“Same Country”) Speciation
5. Polyploidy
6. Autopolyploidy
7. Allopolyploidy
8. Habitat Differentiation
9. Sexual Selection

HYBRID ZONES REVEAL FACTORS THAT CAUSE REPRODUCTIVE ISOLATION



1. Patterns Within Hybrid Zones
2. Hybrid Zones over Time
3. Reinforcement
4. Fusion
5. Stability

SPECIATION CAN OCCUR RAPIDLY OR SLOWLY AND CAN RESULT FROM CHANGES IN FEW OR MANY GENES

1. The Time Course of Speciation
2. Patterns in the Fossil Record
3. Speciation Rates
4. Studying the Genetics of Speciation
5. From Speciation to Macroevolution