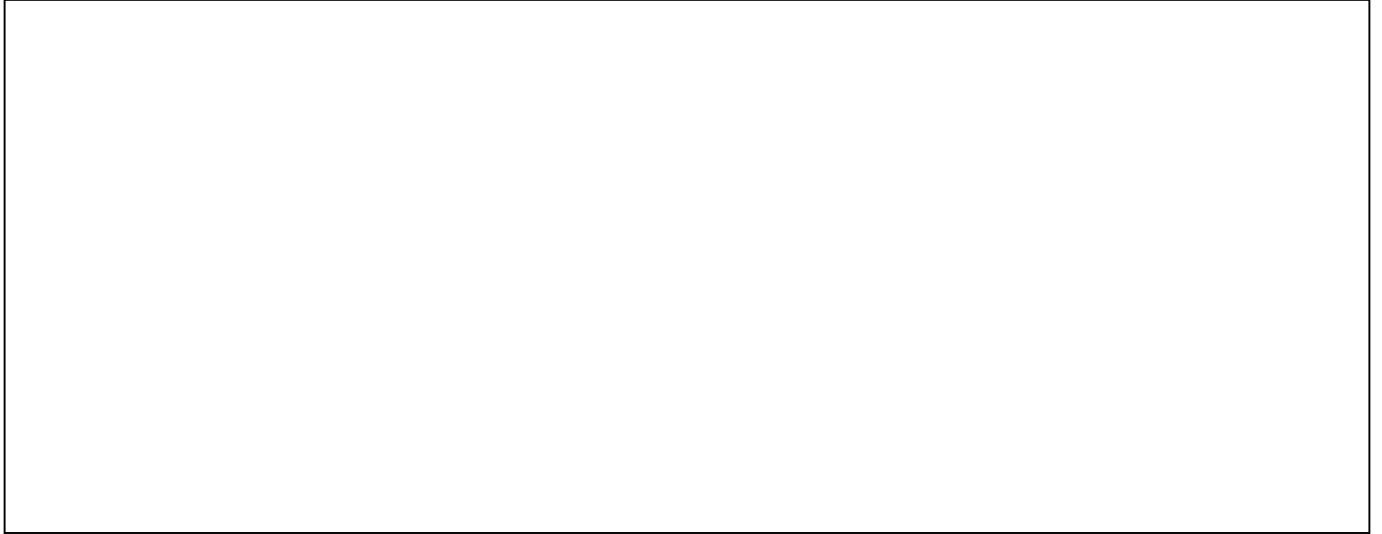


# CHAPTER 4: BIODIVERSITY AND EVOLUTION

## 4-1 What Is Biodiversity and Why Is It Important?

- Biodiversity is a Crucial Part of the Earth's Natural Capital



**Diagrams:**

## 4-2 How Does the Earth's Life Change Over Time?

- Biological Evolution by Natural Selection..

- Evolution...Works Through Mutations and Adaptations

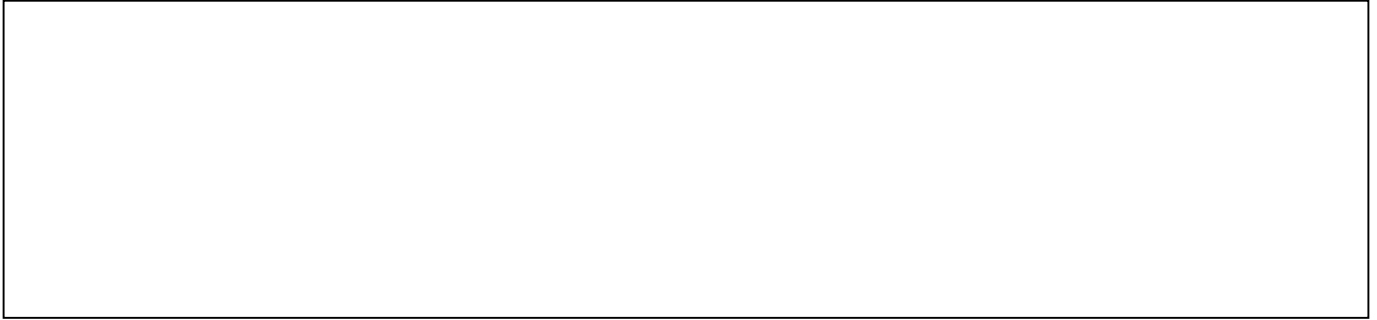
- How Did Humans Become Such a Powerful Species?

- Limits of Adaptation Through Natural Selection

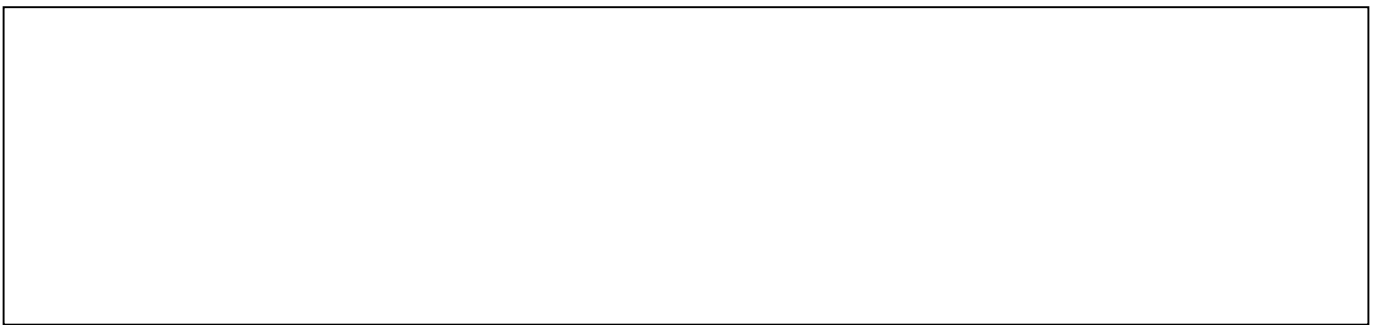
- 3 Common Myths About Evolution Through Natural Selection

### 4-3 How Do Geological Processes & Climate Change Affect Evolution?

- Geological Processes Affect Natural Selection



- Climate Change and Catastrophes Affect Natural Selection



## 4-4 How Do Speciation, Extinction, and Human Activities Affect Biodiversity?

- How Do New Species Evolve?

- Extinction is Forever

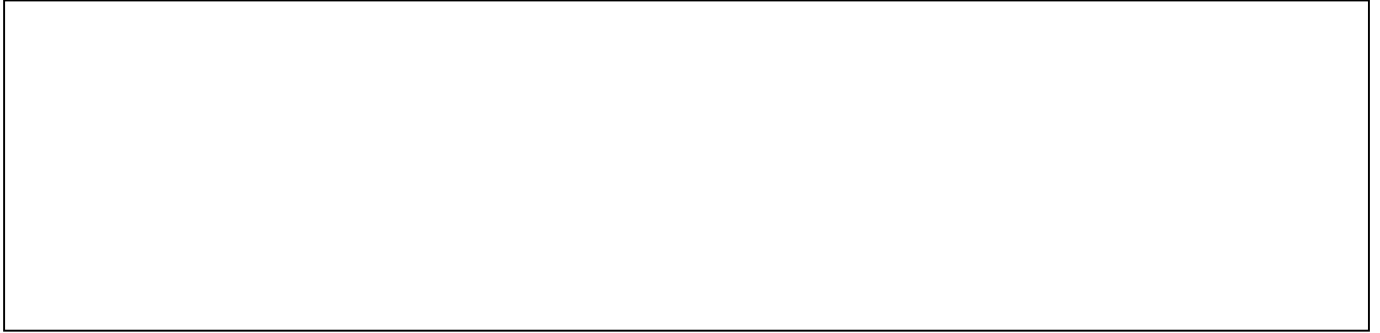
#### **4-5 What Is Species Diversity and Why Is It Important?**

- Species Diversity - the Variety and Abundance in a Particular Place

- Species-Rich Ecosystems Tend to Be Productive and Sustainable

## 4-6 What Roles Do Species Play in an Ecosystem?

- Each Species Plays a Role

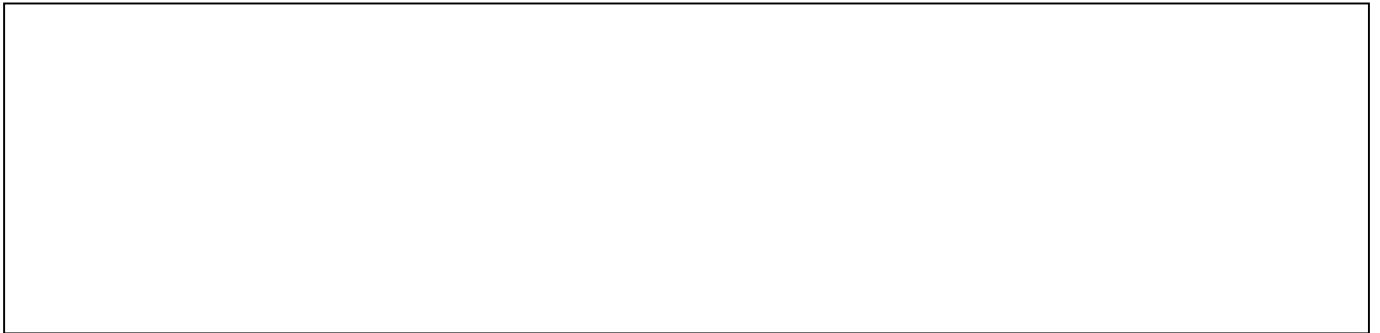


### Diagram:

- Cockroaches



- Species Can Play 5 Major Roles



● Indicator Species: Biological Smoke Alarms

● Why Are Amphibians Vanishing?

● Keystone Species Play Critical Roles

● The American Alligator – Keystone Species That Almost Went Extinct

● Foundation Species Help Form the Bases of Ecosystems