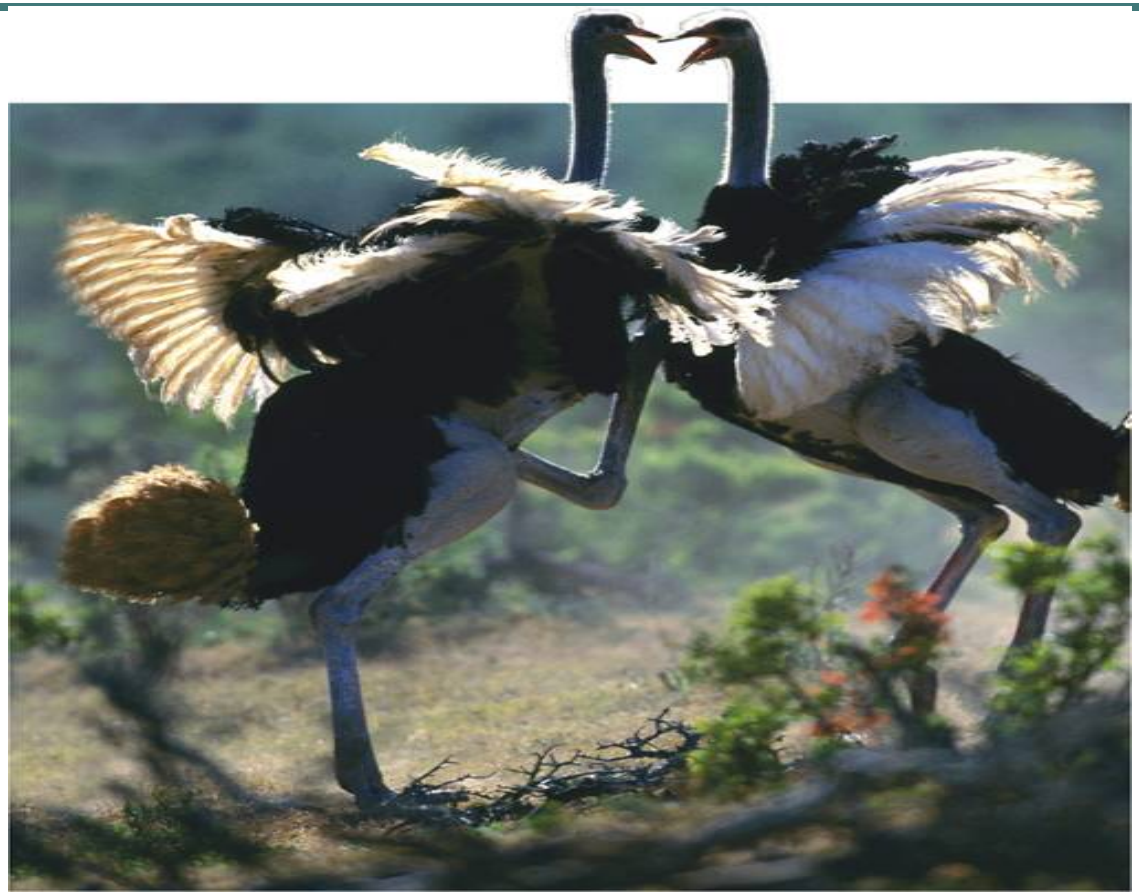
34-2 Patterns of Behavior



Behavioral Cycles

- How do environmental changes affect animal behavior?

- Behavioral Cycles
  - Many animals respond to periodic changes in the environment with daily or seasonal cycles of behavior.

Behavioral Cycles

- Several species of reptiles and mammals are active during warm seasons but enter into dormancy during cold seasons.

- Dormancy allows an animal to survive periods when food and other resources may not be available.

Behavioral Cycles

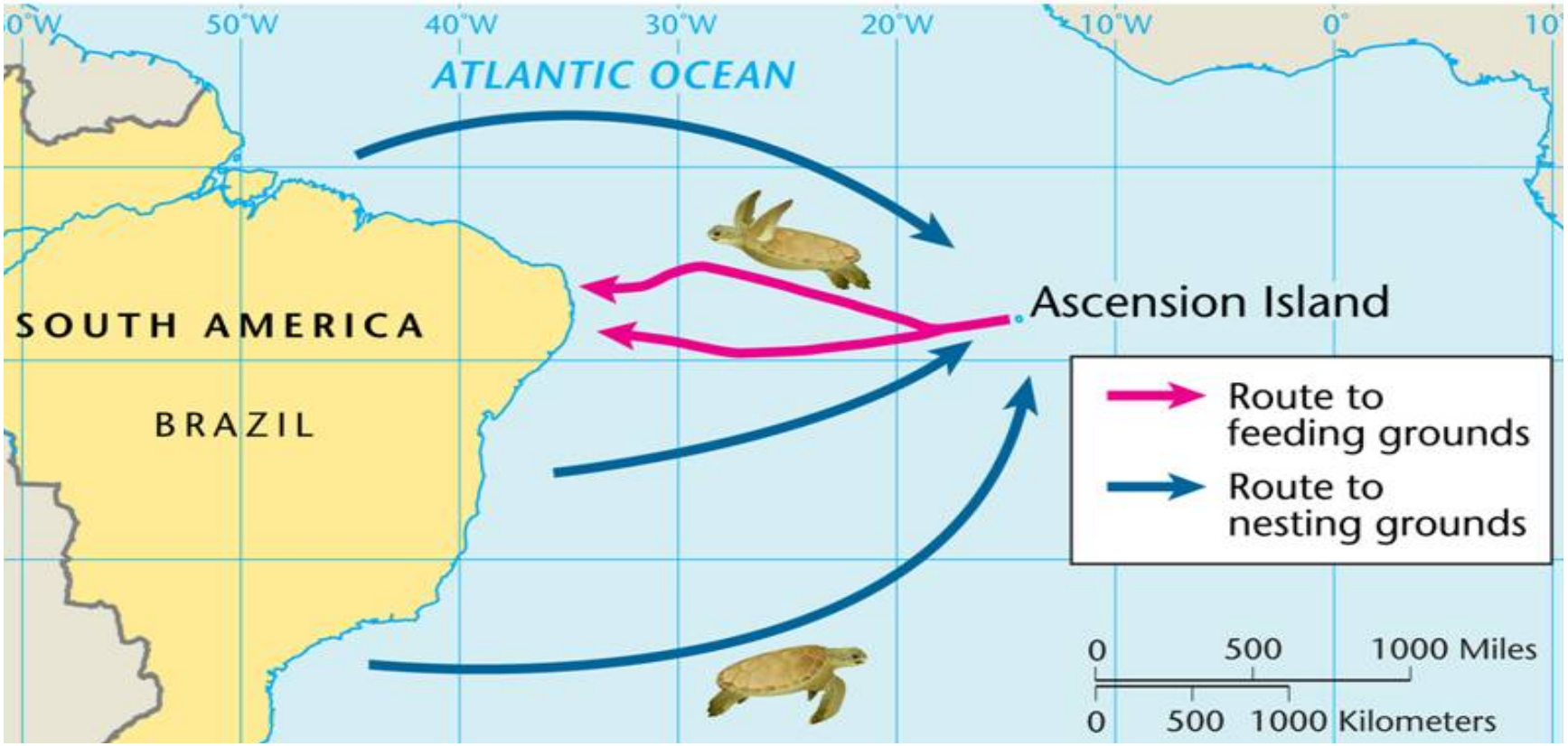
- One type of behavior that is influenced by changing seasons is **migration**, the periodic movement from one place to another and then back again.

Behavioral Cycles

- Between December and June, green sea turtles migrate from feeding grounds along the coast of Brazil to mate and nest on Ascension Island.

- This migration allows the sea turtles to take advantage of favorable environmental conditions.

- Migratory Patterns of Sea Turtles
  Behavioral Cycles



Behavioral Cycles

- Behavioral cycles that occur in daily patterns are called **circadian rhythms**.

- Sleeping at night and being awake during the day is an example of a circadian rhythm.

Courtship

- **How does courtship increase an animal's evolutionary fitness?**
- To pass along its genes to the next generation, any animal that reproduces sexually needs to mate with another member of its species at least once.
- Courtship behavior is part of an overall reproductive strategy that helps many animals identify healthy mates.

Courtship

- In **courtship**, an individual sends out stimuli—such as sounds, visual displays, or chemicals—in order to attract a member of the opposite sex.

- In some species, courtship involves a series of behaviors called rituals.

Courtship

- A ritual is a series of behaviors that is performed the same way by all members of a population for the purpose of communicating.

- Most rituals consist of specific signals and individual responses that continue until mating occurs.

Social Behavior

- How do social behaviors increase an animal's evolutionary fitness?
  - When animals interact with members of their own species, they are exhibiting social behavior.
  - Many animals form societies, or groups of related animals of the same species that interact closely and cooperate.

Social Behavior

- Membership in a society offers great survival advantages.
- Zebras and other grazers band together when grazing. As a group, they are safer from predators.

Social Behavior

- Animal societies also use strength in numbers to:
  - improve their ability to hunt.
  - protect their territory.
  - guard their young.
  - fight with rivals.

Social Behavior

- Members of a society are often closely related to one another. Related individuals share a large proportion of each other's genes.

- Therefore, helping a relative survive increases the chance that the genes an individual shares with that relative will be passed along to offspring.

Social Behavior

- Primates form some of the most complex societies known.
- Macaque, baboon, and other primate societies hunt together, travel in search of new territory, and interact with neighboring societies.

Competition and Aggression

- **Competition and Aggression**
  - Some animals have behaviors that prevent others from using limited resources.
  - Often, such patterns involve a specific area, or **territory**, that is occupied and protected by an animal or group of animals.
  -
  - Territories contain resources that are necessary for an animal's survival and reproduction.

Competition and Aggression

- By claiming a territory, an animal keeps others at a distance.
- If a rival enters a territory, the “owner” may attack the rival and drive it away.

Competition and Aggression

- When two or more animals try to claim limited resources, competition occurs.
- Many animals use rituals and displays when they compete.
- Animals may show **aggression**, a threatening behavior that one animal uses to gain control over another.

Communication

- **How do animals communicate?**

- **Communication**
  - When animal behavior involves more than one individual, some form of communication is involved.

  - **Communication** is the passing of information from one organism to another.

Communication

- Animals may use visual, sound, touch, or chemical signals to communicate with one another.

- **Visual Signals**
  - Animals with good eyesight often use visual signals involving movement and color.

Communication

- **Chemical Signals**
  - Animals with well-developed senses of smell may communicate with chemicals.
  - Some animals release pheromones to mark a territory or to signal their readiness to mate.
  - **Pheromones** are chemical messengers that affect the behavior of other individuals of the same species.

Communication

- **Sound Signals**
  - Animals with strong vocal abilities communicate with sound.
  - Some animals that use sound have evolved elaborate communication systems.

Communication

- **Language**
  - **Language** is a system of communication that combines sounds, symbols, or gestures according to sets of rules about word order and meaning.
  - Only humans are known to use language.

END OF SECTION