

## 16.1 Darwin's Voyage of Discovery

### Lesson Objectives

-  State Charles Darwin's contribution to science.
-  Describe the three patterns of biodiversity noted by Darwin.

### Lesson Summary

**Darwin's Epic Journey** Darwin developed a scientific theory to explain how **evolution**, or change over time, occurs in living things. Darwin's theory explains how modern organisms have evolved over long periods of time through descent from common ancestors.

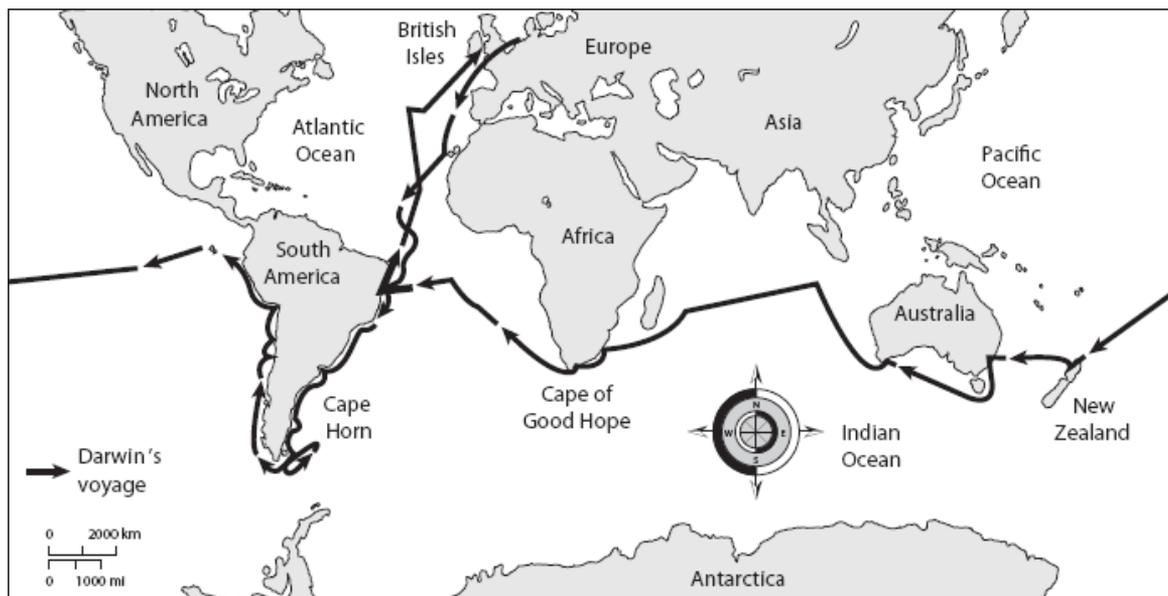
**Observations Aboard the *Beagle*** During his five-year trip on the *Beagle*, Darwin made many observations and collected a great deal of evidence.

- ▶ He noticed that many different, yet ecologically similar, animal and plant species occupied different, yet ecologically similar, habitats around the globe.
- ▶ On the Galápagos Islands, Darwin noticed that the traits of many organisms—such as the shell shapes of tortoises—varied from island to island. He noticed that different, yet related, animal and plant species occupied different habitats within a local area.
- ▶ Darwin collected **fossils**, the preserved remains of ancient organisms. He noticed that some fossils of extinct species resembled living species.

Darwin's findings led him to think that species are not fixed and that they could change by some natural process.

### Darwin's Epic Journey

1. **THINK VISUALLY** On the map below, (1) find and label the Galápagos Islands (2) circle the names of three large land masses Darwin did not visit on his voyage.

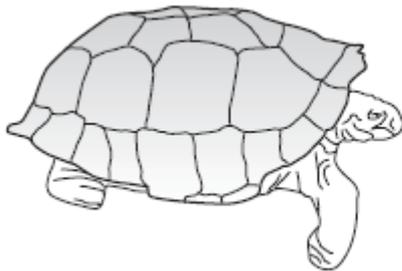


For Questions 2–4, complete each statement by writing the correct word or words. Refer to the map on the previous page as needed.

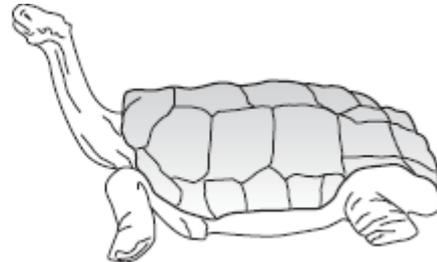
2. Darwin spent most of his time exploring the continent of \_\_\_\_\_; he did not visit \_\_\_\_\_, \_\_\_\_\_, or \_\_\_\_\_.
3. During Darwin’s time, geologists were suggesting that Earth was \_\_\_\_\_.
4. Darwin’s work offers insight into the living world by showing organisms are constantly \_\_\_\_\_.

## Observations Aboard the *Beagle*

Use the drawings of the tortoises to answer Questions 5 and 6.



**Isabela Island tortoise**



**Hood Island tortoise**

5. What important information about the Galápagos Islands tortoises did Darwin learn?

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6. Given its body structure, which tortoise above would require a habitat where food is easy to reach?

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Use the map on the previous page to answer Questions 7 and 8.

7. On the map, place the labels Rheas, Emus, and Ostriches on the continents where they are found. Why were the similarities among rheas, ostriches, and emus surprising to Darwin?

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8. Why might Darwin come to think that the finches of the Galápagos Islands might be related to the finches of South America, despite how different the birds were in appearance?

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9. Darwin observed that the birds he would eventually discover were finches had differently shaped beaks. What might this suggest about the eating habits of the birds? Explain.

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**10.** What did the similarities between fossil animals and modern animals, like the glyptodont and armadillo, suggest to Darwin?

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