

else; there is even a difference between the inhabitants of the different islands; yet all show a marked relationship with those of America, though separated from that continent by an open space of ocean, between 500 and 600 miles in width. The archipelago is a little world within itself, or rather a satellite attached to America, whence it has derived a few stray colonists, and has received the general character of its indigenous productions. Considering the small size of these islands we feel astonished at the number of their aboriginal beings, and at their confined range. Seeing every height crowned with its crater, and the boundaries of most of the lava-streams still distinct, we are led to believe that within a period, geologically recent, the unbroken ocean was here spread out. Hence, both in space and time, we seem to be brought somewhat near to that great fact—that mystery of mysteries—the first appearance of new beings on this earth.

Write About It

9. Darwin says the natural history of the islands deserves attention. How would you describe the kind of attention he gives it? Of what other kinds of writing does this paragraph remind you?
10. Darwin repeatedly used the word *aboriginal*. Look up *aboriginal's* meaning in the dictionary. Why is it important in appreciating what intrigued Darwin as well as understanding his conclusions?
11. Darwin used analogies to describe the structure of the archipelago. Explain the analogy "archipelago as world." Why did Darwin change this analogy to "archipelago as satellite"? What is the difference between the analogies? What scientific point does it help Darwin establish?
12. What do you think is Darwin's most powerful realization here? Write it in your own words.

EXCERPT 4

Here, Darwin develops the process of change and adaptation in a population. Pay attention to the order in which Darwin records his observations and conclusions. What kind of logic do his thoughts obey?

Galapagos Archipelago. Oct., 1835

Of land-birds I obtained twenty-six kinds, all peculiar to the group and found nowhere else. . . . The most curious fact is the perfect gradation in the size of the beaks in the different species of *Geospiza*, from one as large as that of a hawkfinch to that of a chaffinch and even to that of a warbler. . . . Seeing this gradation and diversity of structure in one small, intimately related group of birds, one might really fancy that from an original paucity of birds in this archipelago, one species had been taken and modified for different ends.

Write About It

13. List the scientific terms you recognize. Does Darwin use them the way we do today?
14. Darwin carefully observes the variety or diversity of beak sizes. What descriptive words does he use to sharpen his writing?

Natural Selection Writing in Biology (continued)

15. How does Darwin verbally signal that he is moving from observation to conclusion?

EXCERPT 5

In this excerpt, Darwin attempts to make sense of the similarity between the wildlife populations of the archipelago and that of the South American continent.

Galapagos Archipelago. Oct., 1835

. . . we see that this archipelago, though standing in the Pacific Ocean, is zoologically part of America. If this character were owing merely to immigrants from America, there would be little remarkable in it; but we see that a vast majority of all the land animals, and that more than half of the flowering plants, are aboriginal productions. It was most striking to be surrounded by new birds, new reptiles, new shells, new insects, new plants, and yet by innumerable trifling details of structure, and even by the tones of voice and plumage of the birds, to have the temperate plains of Patagonia, or the hot dry desert of Northern Chile, vividly brought before my eyes. Why, on these small points of land, which within a late geological period must have been covered by the ocean, which are formed of basaltic lava, and therefore differ in geological character from the American continent, and which are placed under a peculiar climate—why were their aboriginal inhabitants, associated, I may add, in different proportions both in kind and number from those on the continent, and therefore acting on each other in a different manner—why were they created on American types of organization?

Write About It

16. Explain the relationship Darwin sees between the individual islands and the continent of South America. What is the importance of the similarities and differences?
17. The last several lines of this paragraph are part of a rather long sentence designed as a question. What do you think of the fact that Darwin poses questions—presumably to himself—in his journal? Do you find yourself doing this in your own biology journal or in other writing?
18. Answer Darwin's question according to what you have learned in the chapter.