

Abby Lodge
Species Arrival to the Galapagos

It is hard to imagine any island, especially the Galapagos Islands, as barren and devoid of all plants and animals. Reading this article however, made me realize that when the volcanoes appeared in the middle of the ocean some five to ten million years ago that's what they were. But because of their prime location, on the sunny equator and amidst the cool Humboldt and Cromwell currents, it did not take long for species to find their way to the island.

It is believable that ancestors of present day Galapagos species that are good swimmers, such as sea lions, sea turtles, and penguins, made their way to the island by swimming along with some of the strong ocean currents. On the other hand, the "raft theory" where species floated to the island – which is 600 km from the mainland – on rafts of vegetation was hard to believe. That was until it was pointed out that the island is home to no native amphibians and few mammals, but many reptiles – probably due to reptiles being better adapted to deal with the harsh conditions of salt and sun for weeks of being on a raft. Seeds that are salt tolerant, such as mangroves and saltbushes from coastal areas, were likely to have arrived to the island by sea as well.

I thought it was interesting to learn that sea birds that made the journey to the island likely brought with them plant seeds or spores attached to their feathers or even in their guts. The wind was also a factor in carrying spores of lower-form plants, such as ferns, mosses, and lichens. However, vascular plants, which have heavier seeds are sparse on the Galapagos because those heavier seeds would have been much more difficult for the wind to transport. Many insects, and even small snails, could have also been carried over from Central or South America by the wind.

Scientists estimate that the plants that were successful at colonizing the islands were those of the "weedy" variety since they would have a wide tolerance for a variety of conditions. One explanation, as to why there are so few showy flowering plants on the Galapagos is that it would have unlikely that pollinators would have arrived on the islands as the plants needed them. I was surprised to learn that there are not that many flowering plants on the islands, but this explanation clarifies this. In the last few centuries, humans have replaced the sea and wind by introducing species, such as goats, fire ants, and blackberries, to the Galapagos that are now threatening the native/endemic wildlife.