

CHARLES DARWIN

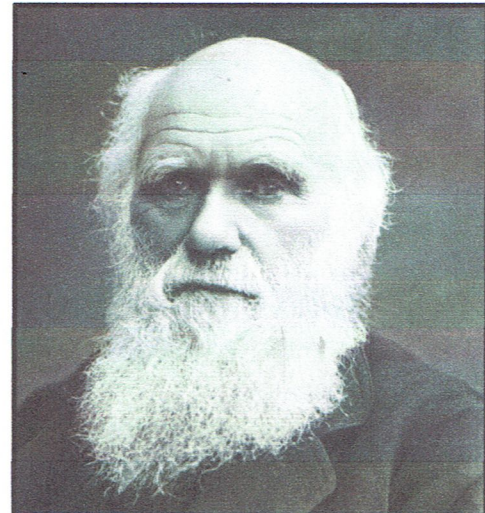
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(1) Would you be surprised to know that I didn't come up with the idea of evolution? The idea had been around for a while and even my grandfather, Erasmus Darwin, studied it. What prevented the acceptance of evolution was the lack of a scientifically backed explanation for how evolution happened. That's where I came in. In my 1859 book, *On the Origin of the Species*, I proposed the first convincing mechanism to explain evolution, which I called **natural selection**.

(2) I was born into a wealthy family on the 12th of February in 1809 in Shropshire, England. I was the fifth of six children and my father, Robert Darwin, didn't expect much from me. When I was a kid, he once said "You care for nothing but shooting, dogs and rat catching and you will be a disgrace to yourself and all your family." I was sent away to boarding school when I was 9 and my education centered around learning ancient Greek and Latin, which I hated. I wasn't interested in studying and wasn't considered very bright by my teachers. However, I did like science, which the school did not offer.

(3) My father, a successful doctor, thought I would do better in medical school so he sent me off at the age of 16 to study at the University of Edinburgh, but I still wasn't happy. All the lectures were boring, except for the ones on chemistry. I was disgusted by the dissections of human cadavers and live surgical operations made me nauseous. Hospitals are depressing places and I knew I didn't want to work in one. I didn't care to pass my exams.

(4) Again, my father was frustrated with me so he decided maybe I would be more successful studying to become a clergyman for the Church of England. He sent me to study at the University of Cambridge in 1828, right before my 20th birthday. He would be angry to know that I spent my time doing a lot of hunting, drinking and playing cards, but for once I was also happy. At Cambridge I was able to pursue my interests in science, especially botany and zoology. I became obsessed with collecting beetles. Once I was so excited to find two rare beetles that I quickly captured one in each hand. But then there appeared a third beetle that was running away and so I shoved one of the beetles into my mouth to free a hand to quickly capture the third beetle. Alas, the one in my mouth released a noxious spray all over my tongue! I still love beetles.



Charles Darwin
Naturalist (1809-1882)

(5) I successfully graduated with a degree in 1831 and was offered a position as a naturalist on a ship called the HMS Beagle. It was a survey ship for the British Royal Navy going on a five year mission around the islands of the South Seas. On our journey, I gathered numerous samples of plants, animals and fossils and I wrote about them extensively. On the Galapagos Islands, I was able to collect many never seen before species of finches. The abundance of the natural world around me was dazzling and I constantly wondered how all of these different species came to exist.

(6) In 1836, I returned home but my research was just beginning. It was time to analyze all of my specimens and send them out to experts. Paleontologists were excited by my fossils and ornithologists were excited about my finch collection. To the relief of my father, I had become well respected. Scientists were lining up to take a look at my extensive and impressive collection of specimens.

(7) After my travels, I was completely convinced that evolution occurred, but the question of how it happened still plagued me. Here is where I have to acknowledge three great contributions to the development of my idea of natural selection. First in 1838, I read Thomas Malthus' theories on population. He stated that there were limited resources on Earth and that all organisms needed to

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compete with each other to get them. Malthus made me realize that only the individuals with the best adaptations/traits could survive in a such a competitive environment. Second, my observations on the breeding of domestic animals showed me that desirable traits could be spread throughout a population if the traits were selected for. Third, I was influenced by Charles Lyell who proposed that the Earth was very old and that there were natural forces constantly changing the geology of the Earth in the past as well as in the present. This made me think that the same held true of species over time. As well, if Earth was indeed so old, small changes in populations over vast stretches of time could lead to entirely new species. Natural selection was so beautifully simple; organisms with the traits best adapted to the conditions of their environment had the

best chances of survival and passing their traits on to offspring. Continued over generations, the adaptive trait would spread through the population and cause the species to evolve.

(8) Though I was excited by my idea I didn't publish my findings immediately. I spent many years pondering the idea until in 1858, a shock came in the mail. A young amateur naturalist, named Alfred Russel Wallace, wrote me a letter stating that he had come up with a theory for evolution; it was the same as mine! I had to reveal my idea to the world quickly or else have Wallace go down in history as the man who came up with the theory of natural selection. In 1859, I published my now famous book, *On the Origin of Species by Means of Natural Selection*, and that's why this article is about me and not about Alfred Russel Wallace.