Charles Darwin was born in 1809 in Shrewsbury, England. His father, a doctor, had high hopes that his son would earn a medical degree at Edinburgh University in Scotland, where he enrolled at the age of sixteen. It turned out that Darwin was more interested in natural history than medicine—it was said that the sight of blood made him sick to his stomach. While he continued his studies in theology at Cambridge, it was his focus on natural history that became his passion.

In 1831, Darwin embarked on a voyage aboard a ship of the British Royal Navy, the HMS Beagle, employed as a naturalist. The main purpose of the trip was to survey the coastline of South America and chart its harbors to make better maps of the region. The work that Darwin did was just an added bonus.

Darwin spent much of the trip on land collecting samples of plants, animals, rocks, and fossils. He explored regions in Brazil, Argentina, Chile, and remote islands such as the Galápagos. He packed all of his specimens into crates and sent them back to England aboard other vessels.

Upon his return to England in 1836, Darwin's work continued. Studies of his samples and notes from the trip led to groundbreaking scientific discoveries. Fossils he collected were shared with paleontologists and geologists, leading to advances in the understanding of the processes that shape the Earth's surface. Darwin's analysis of the plants and animals he gathered led him to question how species form and change over time. This work convinced him of the insight that he is most famous for—natural selection. The theory of natural selection says that individuals of a species are more likely to survive in their environment and pass on their genes to the next generation when they inherit traits from their parents that are best suited for that specific environment. In this way, such traits become more widespread in the species and can lead eventually to the development of a new species.

In 1859, Darwin published his thoughts about evolution and natural selection in On the Origin of Species. It was as popular as it was controversial. The book convinced many people that species change over time—a lot of time—suggesting that the planet was much older than what was commonly believed at the time: six thousand years.

Charles Darwin died in 1882 at the age of seventy-three. He is buried in Westminster Abbey in London, England. **(https://education.nationalgeographic.org/resource/charles-darwin/)**

Extract from the Introduction of The Origin Of Species by Charles Darwin, 1859

When on board H.M.S. 'Beagle,' as naturalist, I was much struck with certain facts in the distribution of the organic beings inhabiting South America, and in the geological relations of the present to the past inhabitants of that continent. These facts, as will be seen in the latter chapters of this volume, seemed to throw some light on the origin of species - that mystery of mysteries, as it has been called by one of our greatest philosophers. On my return home, it occurred to me, in 1837, that something might perhaps be made out on this question by patiently accumulating and reflecting on all sorts of facts which could possibly have any bearing on it. After five years' work I allowed myself to speculate on the subject, and grew up some short notes; these I enlarged in 1844 into a sketch of the conclusions, which then seemed to me probable; from that period to the present day I have steadily pursued the same object. I hope that I may be excused for entering on these personal details, as I give them to show that I have not been hasty in coming to a decision.

[.....]

In considering the origin of species, it is quite conceivable that a naturalist, reflecting on the mutual affinities of organic beings, on their embryological relations, their geographical distribution, geological succession, and other such facts, might come to the conclusion that species have not been independently created, but had descended, like varieties, from other species. Nevertheless, such a conclusion, even if well founded, would be unsatisfactory, until it could be shown how the innumerable species inhabiting this world have been modified, so as to acquire that perfection of structure and coadaptation which justly excites our admiration. Naturalists continually refer to external conditions, such as climate, food, etc., as the only possible cause of variation. In one limited sense, as we shall hereafter see, this may be true; but it is preposterous to attribute to mere external conditions, the structure, for instance, of the woodpecker, with its feet, tail, beak, and tongue, so admirably adapted to catch insects under the bark of trees. In the case of the mistletoe, which draws its nourishment from certain trees, which has seeds that must be transported by certain birds, and which has flowers with separate sexes absolutely requiring the agency of certain insects to bring pollen from one flower to the other, it is equally preposterous to account for the structure of this parasite, with its relations to several distinct organic beings, by the effects of external conditions, or of habit, or of the volition of the plant itself.

It is, therefore, of the highest importance to gain a clear insight into the means of modification and coadaptation. At the commencement of my observations it seemed to me probable that a careful study of domesticated animals and of cultivated plants would offer the best chance of making out this obscure problem. Nor have I been disappointed; in this and in all other perplexing cases I have invariably found that our knowledge, imperfect though it be, of variation under domestication, afforded the best and safest clue. I may venture to express my conviction of the high value of such studies, althouyh they have been very commonly neglected by naturalists.

From these considerations, I shall devote the first chapter of this Abstract to Variation under Domestication. We shall thus see that a large amount of hereditary modification is at least possible; and, what is equally or more important, we shall se how great is the power of man in accumulating by his Selection successive slight variations. I will then pass on the variability of species in a state of nature; but I shall, unfortunately, be compelled to treat this subject far too briefly, as it can be treated properly only by giving long catalogues of facts. We shall, however, be enabled to discuss what circumstances are most favourable to variation. In the next chapter the Struggle for Existence amongst all organic beings throughout the world, which inevitably follows from the high geometrical ratio of their increase, will be considered. This is the doctrine of Malthus, applied to the whole animal and vegetable kingdoms. As many more individuals of each species are born than can possibly survive; and as, consequently, there is a frequently recurrent struggle for existence, it follows that any being, if it vary however slightly in any manner profitable to itself, under the complex and sometimes varying conditions of life, will have a better chance of surviving, and thus be naturally selected. From the strong principle of inheritance, any selected variety will tend to propagate its new and modified form.

This fundamental subject of Natural Selection will be treated at some length in the fourth chapter; and we shall then see how Natural Selection almost inevitably causes much Extinction of the less improved forms of life, and leads to what I have called Divergence of Character. In the next chapter I shall discuss the complex and little known laws of variation. In the five succeeding chapters, the most apparent and gravest difficulties in accepting the theory will be given: namely, first, the difficulties of transitions, or how a simple being or a simple organ can be changed and perfected into a highly developed being or into an elaborately constructed organ; secondly, the subject of Instinct, or the mental powers of animals; thirdly, Hybridism, or the infertility of species and the fertility of varieties when intercrossed; and fourthly, the imperfection of the Geological Record. In the next chapter I shall consider the geological succession of organic beings throughout time; in the twelfth and thirteenth, their geographical distribution throughout space; in the fourteenth, their classification or mutual affinities, both when mature and in an embryonic condition. In the last chapter I shall give a brief recapitulation of the whole work, and a few concluding remarks.