

# On the Origin of Species

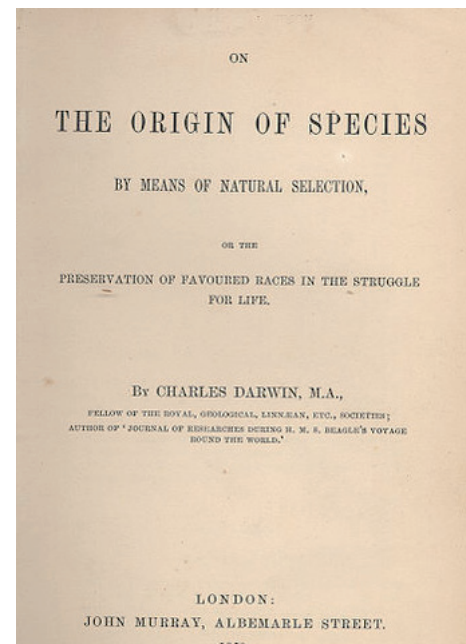
Natural Selection -- its power compared with man's selection -- its power on characters of trifling importance -- its Power at all ages and on both sexes -- Sexual Selection -- On the generality of intercrosses between individuals of the same species -- Circumstances favourable and unfavourable to Natural Selection, namely, intercrossing, isolation, number of individuals -- Slow action -- Extinction caused by Natural Selection -- Divergence of Character, related to the diversity of inhabitants of any small area, and to naturalisation -- Action of Natural Selection, through Divergence of Character and Extinction, on the descendants from a common parent -- Explains the Grouping of all organic beings

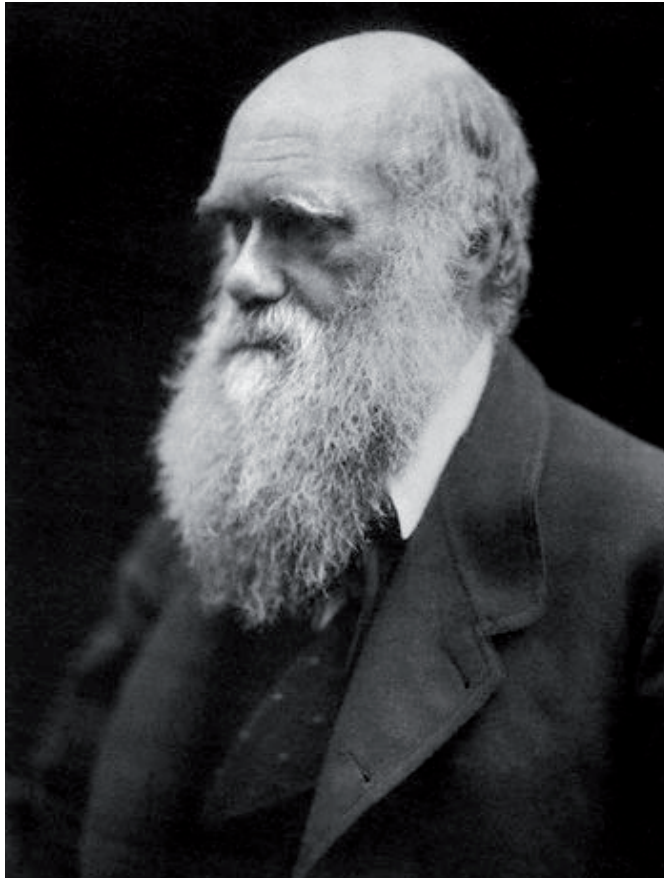
How will the struggle for existence, discussed too briefly in the last chapter, act in regard to variation? Can the principle of selection, which we have seen is so potent in the hands of man, apply in nature? I think we shall see that it can act most effectually. Let it be borne in mind in what an endless number of strange peculiarities our domestic productions, and, in a lesser degree, those under nature, vary; and how strong the hereditary tendency is. Under domestication, it may be truly said that the whole organisation becomes in some degree plastic. Let it be borne in mind how infinitely complex and close-fitting are the mutual relations of all organic beings to each other and to their physical conditions of life. Can it, then, be thought improbable, seeing that variations use-

ful to man have undoubtedly occurred, that other variations useful in some way to each being in the great and complex battle of life, should sometimes occur in the course of thousands of generations? If such do occur, can we doubt (remembering that many more individuals are born than can possibly survive) that individuals having any advantage, however slight, over others, would have the best chance of surviving and of Procreating their kind? On the other hand, we may feel sure that any variation in the least degree injurious would be rigidly destroyed. This preservation of favourable variations and the rejection of injurious variations, I call Natural Selection. Variations neither useful nor injurious would not be affected by natural selection, and would be left a fluctuating element, as perhaps we see in the species called polymorphic.

We shall best understand the probable course of natural selection by taking the case of a country undergoing some physical change, for instance, of climate. The proportional numbers of its inhabitants would almost immediately undergo a change, and some species might become extinct. We may conclude, from what we have seen of the intimate and complex manner in which the inhabitants of each

country are bound together, that any change in the numerical proportions of some of the inhabitants, independently of the change of climate itself, would most seriously affect many of the others. If the country were open on its borders, new forms would certainly immigrate, and this also would seriously disturb the relations of some of the former inhabitants. Let it be remembered how powerful the influence of a single introduced tree or mammal has been shown to be. But in the case of an island, or of a country partly surrounded by barriers, into which new and better adapted forms could not freely enter, we should then have places in the economy of nature which would assuredly be better filled up, if some of the original inhabitants were in some manner modified; for, had the area been open to immigration, these same places would have been seized on by intruders. In such case, every slight modification, which in the course of ages chanced to arise, and which in any way favoured the individuals of any of the species, by better adapting them to their altered conditions, would tend to be preserved; and natural selection would thus have free scope for the work of improvement.





## Darwin Day 2010

12 February

## About Atheist Society

Who are we? We're a group of atheists, Humanists, rationalists, secularists and hey, even the odd religious person who is interested in promoting secular discussion or is interested in atheism and rationalism thinking. Basically we're here for atheists and people interested in atheist thinking.

We usually hold our weekly meetings on a Tuesday evenings. Check out events page to find out what upcoming events we have. We run courses on a Friday. We also hold frequent one off events such as debates, socials and other exciting stuff - again, it's all on the events page.

<http://leeds.atheistsoc.org/>

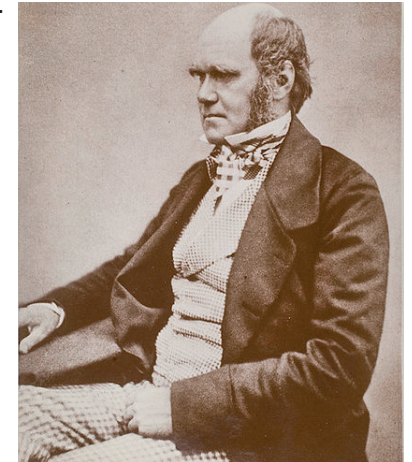


## About Darwin Day

Darwin Day is a celebration of the anniversary of the birth of Charles Darwin. It is held on February 15th each year. The 2009 celebration will mark the 200th anniversary of his birth.

### Why celebrate Darwin Day?

Darwin Day is a fantastic opportunity to get out there and promote free thinking. While Darwinism is not instinctively linked to atheism, it is never the less very important and very relevant.



Charles Darwin was a classic example of a free thinker who was willing to put aside his core beliefs in order to accept the evidence he saw before him - he chose not to follow dogma while the church thought against his ideas which seemed to contradict the Bible.

Also, importantly, Darwinian evolution provided a real alternative to the Biblical explanation for how the variety of life existed on Earth and therefore allowed people to build a far more realistic atheist worldview.