10-BY7 Speciation

Evolution is where one thing becomes two things and those two things become more and more until we become humans.

Claim(s)

Evolution happens by a process of living things splitting to become two different kinds of living thing.

Humans evolved from a long process of different living things splitting into other living things.

Any challenges to the expressed claim?

Anything to disagree with?

Any clarification needed?

Question(s).

What environmental factors might cause the splitting of a species into two?

What biological factors might cause the splitting of a species into two?

Note: This particular quotation sums up in a very simple but important manner an essential feature of the process of evolution. While much detail might remain to be added to this pupil's understanding, the essential orientation is correct.

Grasping the nature of evolution as a gradual splitting or dividing of one population of a species into two or more separate breeding groups is fundamental to understanding the big picture of macroevolution. This correct view is in contrast to a mistaken belief that evolution is a linear process where an individual gradually transforms in some way during its lifetime, with that change being transmitted to its offspring.

Environmental factors might cause a population of living things to become geographically isolated into two separate groups with no inter-breeding between them. Over many generations, the differences between the two groups may become so marked that they have become separate species. The geographical causes might include earthquakes, volcanic eruptions, flooding, or continental drift. Alfred Russel Wallace, who died in 1913 has been called the 'father of biogeography'. Independently of Darwin, he realised the principle of Natural Selection and discovered the 'line' through Southeast Asia which bears his name. This is what first suggested to Charles Darwin that species evolve from a common ancestor. A famous example of biogeography was in the study of Galapagos finches by Charles Darwin.

The build-up of many small genetic changes or mutations in a population over a long period of time can also give rise to speciation.