

Theories of evolution were widely taught long before Darwin. The whole purport of Darwin's book was his claim that he could show the process that was involved. He maintained in the first edition of his Origin of Species that "Natural Selection" was sufficient to explain how such changes might have occurred and therefore to demonstrate that evolution was a fact.

Upon further reflection Darwin began to see that this was an insufficient explanation. Natural selection can be the means of preserving a useful variety after it has come into existence, but can hardly explain its origin. It can result in the extinction of ^aspecies that may be ill-adapted to existence in a changing environment. It may bring about the elimination of the unfit, but can hardly explain the production of the fit. One cannot really prove evolution by showing how a variation can be preserved, unless he can also show the activity of a force sufficient to cause the variation. Thus what is often blithely cast aside as merely an unsolved problem is really the heart of the matter. Since there is no evidence that such changes have actually occurred in nature, the real reason why many believe in evolution is their conviction that an explanation has been given that shows how the indicated changes might have occurred.

DARWIN'S NEW THEORIES

According to Darwin's original idea the lines of descent of every creature are in a constant state of flux with multitudes of small variations appearing, so that all that is necessary for the rise of new types of life is that the best ones be selected, and the others allowed to become extinct. He assumed the existence of unlimited natural variation. Experience and observation have shown that this is not the case. If it were, there would be no such thing as a species or a genus, but all animals and plants would blend gradually into one another. All observers recognize that existing plants and animals fall into definite categories with clear-cut gaps between them.