

HOW DARWIN CONCEIVED HIS IDEA OF 'NATURAL SELECTION'

Darwin tells us that during a number of years he pondered over the many types of life in the world and wondered how such variety had come into existence. One day in October 1838, while recovering from an illness, he amused himself by reading a book by Thomas Robert Malthus called An Essay on Population. This book had been much discussed since the appearance of its first edition in 1797. Malthus advanced the idea that mankind keeps increasing geometrically while its food supply increases only arithmetically, and that therefore wars, pestilence and famine are unavoidable, unless some other means of checking the increase of population should be found.

As Darwin read this book he thought of the great number of animals and plants that are produced and how comparatively few of them manage to survive and in turn to produce offspring. Then it occurred to him that this might be the key to the origin of the many types of plants and animals that exist. Since no offspring is exactly like its parent he assumed that in time a great variety would proceed from any one source. Out of this great variety it would be those most fitted to meet the conditions of their environment or to overcome the attacks of their natural enemies that would survive and produce further offspring. Thus a gradual change would occur. Darwin thought of this change as being quite unlimited, and therefore able to produce extremely great results over a period of time. Although he called his idea "natural selection" he later said that perhaps it might better have been described by the term "survival of the fittest," which Herbert Spencer had originated and used in various writings during the years preceding the eventual publication of Darwin's Origin of Species.

As soon as this idea occurred to Darwin he decided to gather facts that would support it. He wrote out a statement of his theory and placed it in a safe, returning to it from time to time to add further evidence, and intending eventually to publish a large work in which he would deal fully with the matter.