

## EVOLUTION—A THEORY THAT HAS SURVIVED 100 GLORIOUS YEARS

ON July 1, 1858—100 years ago—a paper "On the Tendency of Species to form Varieties; and on the Perpetuation of Varieties and Species by Natural Means of Selection" was read to members of the Linnean Society of London.

The authors of this joint essay, Charles Darwin and Alfred Russel Wallace, thereby presented the world with the theory of Evolution.

Little attention was given at that time to this idea whose force was to upset the foundation of then prevailing thought and belief and pave the way for a radical approach to the study of the natural sciences.

Interest began to be aroused, however, in the following year, when Darwin published his great work "On the Origin of the Species." The whole edition of 1,250 copies was exhausted on the day of issue.

A storm of controversy arose over the book, reaching its height at the British Association of Oxford in 1860, when a celebrated duel was fought between Bishop Wilberforce of Ox-

ford and T.H. Huxley, who was the foremost champion of the evolutionary theory during its early struggles.

Charles Darwin was born in Shrewsbury in 1809, the grandson of Dr. Erasmus Darwin, famous scientist and poet. He spent three fruitless years preparing for the medical profession, for which he was temperamentally not suited.

His father then sent him to Cambridge with the idea that he should become a clergyman. After an undistinguished academic career, he set out on a global tour as the naturalist of a surveying expedition on H.M.S. Beagle.

### Life pattern

The voyage was the real preparation for his life work. The pattern of life he saw around him made Darwin think in broad lines, in terms of continuity and gradual change. It led him to the idea of evolution.

Although by that time, the notion was no longer original, it was he who marshalled the evidence in a more convincing manner than had ever been done.

He deduced Evolution's agent—Natural Selection. Darwin dedicated the rest of his productive life building up his case until he had

overwhelming evidence for his conclusions.

Between 1854 and 1862, another British naturalist, Alfred Russel Wallace, was working in the Malay Archipelago.

Wallace, too, struck upon the notion of evolution by natural selection.

Whereas Darwin brooded over the theory for twenty years, Wallace conceived the idea in a dramatic fashion.

He was under a severe attack of fever at Ternate, in the Moluccas, when, to use his own words, "there suddenly flashed upon me the idea of survival of the fittest."

He wrote it down in the form of an essay—"On the Tendency of Varieties to Depart Indefinitely from the Original Type"—and posted it to Darwin.

What Darwin read was a summary of his own work. "I have never seen a more striking coincidence. Even his terms now stand at the head of my chapters," declared the astonished Darwin to a friend.

And so, their joint effort was read in the sombre dignified meeting room of the Linnean Society on that historic occasion exactly one hundred years ago.

The theory of evolution is

succinctly summarised in the last paragraph of the "Origin of the Species."

It states that the varying forms of nature are produced by the laws surrounding us.

These laws are: "Growth with reproduction;

• Inheritance which is almost implied by reproduction;

Variability from the indirect and direct action of the conditions, of life, and from use and disuse; a ratio of Increase so high as to lead to a Struggle for Life and as a consequence to Natural Selection, entailing Divergence of character and the Extinction of less-improved forms.

### War of nature

Thus, from the war of nature, from famine and death, the most exalted object which we are capable of conceiving, namely the production of higher animals, directly follows...."

When the "Origin of the Species" was published, the public looked at it with terrified fascination.

Today, the theory formulated by Darwin and Wallace is accepted the world over. It has withstood the test of time, it has lived a glorious century.