

Darwin and Discovery

Arguments of 2009: the theories of a great scientist

Next year marks the 200th anniversary of the birth of Charles Darwin. It is also the 150th anniversary of the publication of Darwin's *On the Origin of Species*. The life and work of a great scientist and a seminal figure in intellectual history will, therefore, be the subject of intense interest and debate in the coming year. Such events as an outstanding Darwin exhibition at the Natural History Museum in London, a Darwin Anniversary Festival at Cambridge, and the reopening to public view of Darwin's home, Down House in Kent, merit enthusiastic interest and support.

But one aspect of these educational ventures is especially worth noting. Darwin is not merely a man of his time. The extent of his achievement gives him a plausible claim to be counted the greatest figure in this nation's history. And his ideas, while confirmed by mountains of evidence, remain startling in their implications for pre-scientific modes of thinking. They are consequently an enduring target for movements that disdain critical inquiry and the life of the mind. In 2009 the celebration of Darwin has a value beyond a 19th-century scientist's findings about the natu-

ral world. The communication of Darwin's ideas is integral to a culture that values learning over superstition and dogmatism.

The publication of *On the Origin of Species* on November 24, 1859, represented — in the words of Ernst Mayr, the biologist — “perhaps the greatest intellectual revolution experienced by mankind”. The book's importance lay in Darwin's not only adducing the fact of evolution but also in discovering its main mechanism. This was natural selection, the process by which small variations operating over millions of generations produce new varieties and new species.

The ideas formulated in Darwin's writings are not merely a branch of science. They are the keystone of numerous areas of inquiry. Theodosius Dobzhansky, the geneticist, encapsulated Darwin's importance when he observed: “Nothing in biology makes sense, except in the light of evolution.” When, in 1953, Francis Crick and James Watson unravelled the structure of DNA — among the most important scientific discoveries of the last century — they demonstrated the power of Darwin's insights. Here were the units

of inheritance that cause evolution, and that provide the link between all living organisms.

Despite the overwhelming evidence for evolution, Darwin's ideas remain unsettling to some, because they demonstrate that natural processes are a sufficient explanation for the development of life on Earth. Mainstream religious denominations have no difficulty accepting Darwin's discoveries. But a minority, across faiths, aim to present sacred creation myths (sometimes ineffectually disguised under the label “Intelligent Design”) as if they were scientific truth. Extraordinarily, Sarah Palin, the defeated US Republican vice-presidential nominee, is on record as believing that biblical Creationism should be taught in science education alongside evolution.

These are sentiments that must be rebuffed. Darwin's ideas have overwhelming explanatory power. They provide a means of uncovering further mysteries of life, because they are driven by evidence and reason. The commemorations of Darwin's work are of immense educational value. But more, they are a celebration of the spirit of inquiry.