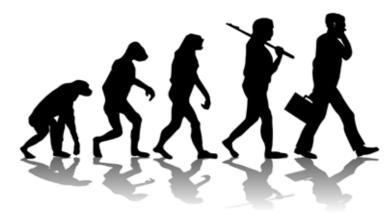


Written and read by **Peter Whitfield**





1	Charles Darwin, philosopher of man and nature	6:00
2	The Beagle, a small ship of 250 tons	5:12
3	He also continued to work on other phenomena	5:24
4	Over the five years following his return	5:12
5	Further support for this view	4:55
6	Second, he could not accept that all changes	4:44
7	As Darwin drew all these insights	4:42
8	We know that he had told his wife Emma	5:09
9	It has been argued that Wallace	5:16
	He finds a grandeur in this view	5:02
11	If this were true of the scientists	5:15
12	Darwin himself of course took little or no part	5:18
	By the 1870s Darwinism	4:41
14	These were major advances	4:49
15	Darwin was buried in Westminster Abbey	1:57

Total time: 1:13:41

DARWIN IN A NUTSHELL Written and read by Peter Whitfield

Charles Darwin is one of the giants in the history of science. Along with Copernicus, Newton and Einstein, he taught us something fundamental about our world, and about the laws of nature. But Darwinism is involved particularly with our view of ourselves, with human origins and human identity. Darwin argued that the multitude of species now present has evolved over aeons of time from common ancestors, and that mankind is no exception; mankind is simply an advanced primate. When first announced in 1859. Darwin's ideas were hugely controversial, for they seemed to strike at the heart of religious belief. Far from being created by God in a single divine act, all life's forms – humans, animals and plants – had evolved, he claimed, from a single primitive type of organism. Darwin portraved nature as working in obedience to blind impersonal laws, not in obedience to the hand of God. 'The struggle for life' and 'the survival of the fittest': these were the phrases that summed up the Darwinian vision. 'Is man an ape or angel?' people asked after reading Darwin; the scientists ranged up on one side and the traditionalists on the other.

Yet Darwinism also fed into the great 19th-century creed of progress. It seemed to suggest that mankind, having evolved from the apes, was now the summit of creation, and that it was his destiny to move forward to ever greater achievements, to intellectual mastery and social freedom. So Darwinism became one of the inspirations of positivism, humanism and socialism. It undermined one kind of faith and advanced another. It was a scientific theory which had enormous resonance outside the field of science itself. Even progressive Christians were able to accept evolution as part of a divine plan: it did not necessarily cut out God, because God could be working through evolution.

man who conceived this The profound and original theory was an enigma. Darwin's face as seen in Victorian photographs is sad, heavy and almost tragic. He looks like a man weighed down by the burden of his own thought. His voyage around the world as a young man laid the foundations of one of the greatest intellectual adventures in history. In South America, Australia and the Pacific he observed the astonishing variety of animal and plant forms, so diverse and yet so obviously related to each other, and he became more and more convinced that 'the species question' was the supreme problem in biology. Yet after his return from the voyage, he became increasingly withdrawn and reclusive. After hammering out his theory over a period of several years in the early 1840s he concealed it for fifteen years because he feared the controversy and criticism that it would

bring upon him. He began to suffer from a mysterious illness which may have been psychosomatic, his ideas having caused particular tension and disturbance in his mind. He lived very quietly in the country with his large family. He had a private fortune and never worked or held any official position throughout his life. He was scarcely a scientist at all in the modern sense – rather an amateur naturalist, an observer who thought deeply about what he saw. His theory of evolution was a great thought-experiment: it was a new way of looking at the things which had had always been there, but which no one else had noticed or understood. He was spurred into publishing his theory because he learnt that another naturalist. Alfred Russel Wallace, was working towards the same ideas

Darwin's book On the Origin of Species was finally published in 1859; it was a landmark not only of biological science but of human thought. Within it, however, Darwin did not directly discuss human evolution; instead he drew all his examples from the animal and plant world, because he was still extremely nervous about how his ideas would be received. In 1871, when the storm had died down, he published *Descent of Man*, in which he made plain that mankind must be considered as a part of the animal kingdom. He also showed how human instincts, morality and social behaviour can evolve, just as do physical forms.

In his own day Darwin's theory remained just that: a theory. It could not be proved because science could not pinpoint any biological mechanism through which evolution could work: how could species change one into another, even over many generations? Only with the age of genetics did this mechanism reveal itself, and we now know that evolution works through random changes in genetic chemistry. It is a measure of Darwin's genius that he was able to develop his ideas while knowing nothing of cellular biology, much less genetic mechanisms.

Darwin is one of the great innovators in scientific thought. His ideas might be seen as bleak, as shattering the old religious myths. Mankind has no divine creator in Darwinian thought, and no immortal soul: he is simply a part of the great processes of nature. But Darwin's ideas may also be seen as positive: there is design and progress in nature, and mankind, with his higher intelligence and creativity, is a central part of it. Perhaps he is even destined to take control of his own evolution, as he has already begun to do through the science of genetics. The ideas of this reclusive Victorian naturalist resonate in so many intellectual fields, and it is for this reason that he remains a key figure in the history of our understanding of ourselves.

This CD presents a clear and lively account of Darwin's life and ideas, bringing out the character of the man himself, and the intellectual excitement of his discoveries.

Notes by Peter Whitfield



Peter Whitfield is an historian and a poet. His books include A Universe of Books: Readings in World Literature and Landmarks in Western Science, New Found Lands – Maps in the History of Exploration. He is a keen cyclist and has written books on his sport.

Credits

Produced by Nicolas Soames Recorded at Hats Off Studios, Oxford Edited by Michael Taylor

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DARWIN INANUTSHELL Written and read by Peter Whitfield

Charles Darwin, father of evolution, was one of the greatest pioneers in science. His five-year voyage on The Beagle, his visit to the Galapagos Islands, his careful work in noting small differences of fauna on different islands – all led to the concept of natural selection, which radically changed the way mankind and the animal world was viewed. But what kind of man was Darwin, and why did he keep his conclusions secret for so many years? In this clear but informative account, Peter Whitfield sets Darwin in the 19th-century society from which he sprang, and considers the effect of his ideas on the 21st century.



Peter Whitfield is an historian and a poet. His books include *A Universe* of Books: Readings in World Literature and Landmarks in Western Science, New Found Lands – Maps in the History of Exploration. He is a keen cyclist and has written books on his sport.

CD ISBN:

978-962-634-944-1

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