

Darwin

It is possible that **Charles Robert Darwin**'s (1809-1882) interest in Nature was influenced by his paternal grandfather, the poet and naturalist Erasmus Darwin. But this interest developed mainly on the fringes of higher education, which did not interest the young Darwin both in Edinburgh, where he studied medicine, and in Cambridge, where he studied theology. In Cambridge, he devoted himself more to his passion for insects, attending lectures on botany given by John Stevens Henslow who persuaded him to start studying geology. He reads a lot: Humboldt, Herschel... In 1831, on his return from a geological excursion in North Wales, he found a letter from Henslow informing him that an unpaid naturalist position was offered on the *HMS Beagle*, commanded by Captain Fitz Roy, who was going around the world for five years. Darwin left, taking with him many naturalist works, especially those of geologist Charles Lyell. From 1831 to 1836, he collected very large quantities of samples, taking notes on all the detailed observations made on the coasts of South America, Tierra del Fuego, Galapagos, Tahiti, New Zealand, etc... Many of his observations were published by Darwin in 1839 in a book, "*Journal of researches*", now known as "*The voyage of the Beagle*", which is in fact the title of the 1905 edition of this book. The exhaustive analysis of the samples collected by Darwin was carried out by various specialists: Richard Owen and George Robert Waterhouse, respectively for fossil and current mammals, John Gould for birds, Leonard Jenyns for fish, Thomas Bell for reptiles. It will serve as a basis for an abundant scientific production that will earn Darwin great scientific recognition.

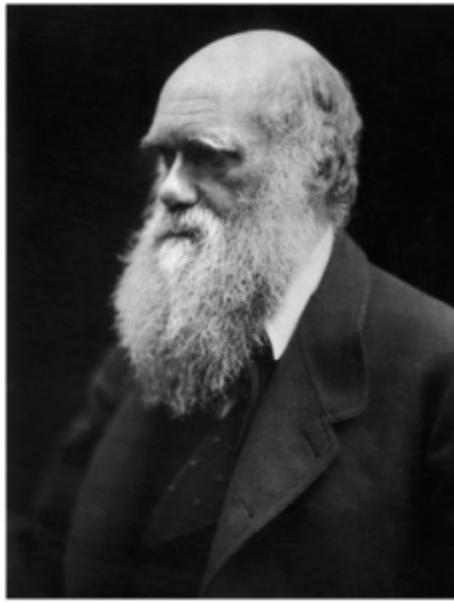


Figure 1. Darwin photographed by Julia Margaret Cameron (1868), [Source: (Public domain) via Wikimedia commons]

But Darwin sees far beyond his observations. In his *Autobiography*, written for his children in 1876 and published after his death, he wrote: "[...] *It was evident that such facts as these, as well as many others, could only be explained on the supposition that species gradually become modified; and the subject haunted me. But it was equally evident that neither the action of the surrounding conditions, nor the will of the organisms [...] could account for the innumerable cases in which organisms of every kind are beautifully adapted to their habits of life—for instance, a woodpecker or a tree-frog to climb trees, or a seed for dispersal by hooks or plumes. [...]*". In 1838, Malthus' reading of "*Essay on the Principle of Population*" allowed him to conceptualize his ideas: "[...] *being well prepared to appreciate the struggle for existence which everywhere goes on from long-continued observation of the habits of animals and plants, it at once struck me that under these circumstances favourable variations would tend to be preserved, and unfavourable ones to be destroyed. The result of this would be the formation of new species. Here then I had at last got a theory by which to work.....*".

In 1839, Darwin married his cousin Emma Wedgwood and had ten children. His ideas on the transformation of species took shape as he continued to publish his observations on corals, volcanic islands... Disrupted by health problems, he wrote successively several drafts - the first in 1842 - of a huge book presenting his theory, but without publishing them. In 1858, Alfred Russel Wallace, a British naturalist then in Malaysia, sent a manuscript to Darwin for communication to Lyell describing the idea of a transformation of species through natural selection. «*I never saw a more striking coincidence*» says Darwin, «*If*

Registering my manuscript sketch written out in 1842 he could not have made a better short abstract! ». Aware of Darwin's anteriority, Lyell and Hooker proposed a joint publication in the *Journal of the Proceedings of the Linnean Society* (meeting of July 1, 1858): a text by Darwin, in fact a summary of his manuscript, was published with the essay written by Wallace. Despite health problems, Darwin then set out to publish a less ambitious version, in volume, of his work: "*The Origin of Species*", which would appear in November 1859. The success of this publication was immediate: six successive editions were published, the last one in 1872. Until 1881, Darwin continued to publish on themes that were close to his heart, especially plants: orchids, floral dimorphism, domestication... The most significant publication of this last period is, in 1871, "*The Descent of Man, and Selection in Relation to Sex*". After his death in 1882, he was buried at Westminster Abbey in London.

Further reading

- Point G. Tort P. (2015) *Le Monde de Darwin*, Éditions de la Martinière, ISBN 978-2732471044
- <https://lejournal.cnrs.fr/articles/charles-darwin-de-lorigine-dune-theorie>
- <http://www.cnrs.fr/cw/dossiers/dosdarwin/darwin.html>
- <http://darwin-online.org.uk/>
- <http://darwin-online.org.uk/content/frameset?viewtype=text&itemID=F1497&pageseq=1>

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